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# USSR Report

AGRICULTURE

No. 1389

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## USSR REPORT

## AGRICULTURE

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### FIELD WORK CONDITIONS, PROBLEMS IN VOLGOGRAD OBLAST

Moscow IZVESTIYA in Russian 13 Apr 83, p 1

[Article by A. Chemonin (Volgograd): "At the Best Time Periods"]

[Text] In the lower Volga area they say that the spring began in December of last year. And it is true that the winter had no snow and was sometimes even warm. But there is little to be glad about in this. Because of the extremely dry autumn it was necessary to appreciably reduce the amount of winter crops, and for the Volgograd steppe zone this means there is a threat of a shortage of grain. Moreover, on many fields the winter crops came up but they did not become strong, and at the end of February and the beginning of March, it did not take very much cold weather to kill some of the winter crops.

The farmers have waited impatiently for these warm and even hot April days in order to rectify the situation.

"What is the most important thing for the harvest now?" I asked the knowledgeable machine operators, the certified agronomists and the experienced farm managers.

"Deadlines and again deadlines," they said as one man. "We must retain the moisture quickly and, if necessary, cultivate the fields repeatedly before planting and then plant them quickly."

The farmers of the oblast understand this quite well. They have extensively developed competition for successfully conducting the work on the spring fields. In the southern rayons--Kotel'nikovskiy, Oktyabr'skiy, Svetloyarskiy and others--they completed the planting of mustard in 2-3 days and they have begun to plant barley here. The majority of farms made a commitment to conduct the planting of spring crops in 80-100 hours. And the collective of the autonomously operating team of the Put' Il'icha kolkhoz in Novoanninskiy Rayon (team leader--N. Kuznetsov) needed only 50 working hours to complete the planting of early grain crops on an area of 400 hectares.

But the harvest does not depend only on the time periods of the work. What is planted is also important. IZVESTIYA has repeatedly reproached Volgograd workers for poor preparation of the seeds. Last spring in a number of rayons they planted seeds that were mainly of the second and even the third class. The farms of Dubovskiy Rayon were especially seriously criticized. The managers of the oblast agricultural administration at that time sincerely assured us that such a thing would not be repeated in the future.

Therefore I went again to this same rayon and to the same farms in order to see what had changed up to this point, and in which direction.

There is the Kolkhoz imeni Chapayev. IZVESTIYA directed several critical remarks to this farm, which at that time were recognized as correct when they were discussed in the oblispolkom. It turns out that last year they tried to improve things on the seed plots, and planted 3,321 hectares of winter crops, of which 2,000 hectares were planted in wheat on fallow, and they used planting material of sufficiently high conditions.

All the winter crops are now in excellent condition. Even during the winter both those with fallow and nonfallow predecessors were top pressed. The spring fields on this farm are fairly extensive--3,800 hectares. The majority of them will be planted in barley. So there will be a good deal of work to do during planting and it is necessary not simply to cope with all the jobs, but to conduct each operation quickly and precisely.

"What deadline does your working schedule call for?" I asked the head agronomist, Tsiganov.

"The work is to be completed in 100 working hours. Everything is ready for this. The moisture has been fully retained and each hectare has been cultivated. We have already planted more than 1,500 hectares in early spike crops. This year we have no seeds of the third class at all. We were criticized for this last year. This year we must achieve a productivity of grain crops of 23.9 quintals. This is a couple of quintals more than the average oblast level. We have hopes of obtaining such a harvest. Two contract teams are employed on the grain fields and all the machine operators in them are responsible and motivated people."

Then there is the Barrikady sovkhoz, of which we spoke last year in not a very favorable light. This year we spoke with the director of the sovkhoz, A. Kosov.

"All 21,000 hectares of grain fields this year are being tended only by teams without work schedules," he told me. "Although their work is only beginning we are already finding quite a different return. Now we have only 5 contract teams and 1 piece-rate brigade--it has not yet changed over to a contract. They are to plant 14,800 hectares of early spring crops. An immense volume of work! There are 48 sets of equipment operating on two shifts. We will complete the planting of early spring crops in 5-6 working days."

"And what about the seeds?"

It turns out that only one-third of the spring fields are being planted in seeds of the first and second classes. Most of the seeds are of the third and even the fourth reproductions. So far they have not been able to obtain anything better even though they have created a seed growing division, are completing the construction of a new grainary, and have improved the arrangement of seed growing in general. Seed growing on the farm would progress appreciably if the farm had a large quantity of fallow fields and changed over to soil protection technology.

On the whole, the planting campaign is progressing at good rates in Volgograd Oblast.

## MAJOR CROP PROGRESS AND WEATHER REPORTING

UDC 632.93:631.53.01

### IMPORTANCE OF HEALTHY SEED STRESSED

Moscow ZASHCHITA RASTENIY in Russian No 4, Apr 83 p 15

[Article by A. I. Miroshnichenko, director of the Kustanay Plant Protection Station: "Healthy Seed--Foundation for the Harvest"]

[Excerpts] In the oblast's enterprises a great amount of attention is given to the struggle against blight in grains. Each year almost all seed material is chemically treated (in 1981--498,300 tons and for the 1983 harvest--over 500,000 tons).

The seed is treated with suspensions of granosan [mercurial fungicide], pentatiuram using Mobitoks machines, PZ-10 as well as at treatment points (on the basis of mechanized threshing floors ZAV-20 and ZAV-40). We consider the last method to be the most promising because at treatment points the maximal mechanization of processes, a precise adherence to preparation dosage and an observance of the rules of environmental protection are foreseen. Bunkers for treatment and dosage equipment are located in closed facilities at a height of 3-4 meters. The grain moves there in batches, is treated with chemicals and then moves to accumulation bunkers.

The best effect is achieved by the timely treatment of grain crops, especially glumaceous, during the fall to winter period. During this time 15-20 percent of seed from glumaceous crops are treated and then stored until the sowing period in storage facilities. The enterprises of Borovskiy and Taranovskiy rayons have been practicing fall chemical treatment for 2-3 years now. Unfortunately, at the present time we cannot increase the volume of fall treatment due to the absence of the necessary number of storage facilities. The remainder of the seed of glumaceous crops and of wheat is also treated ahead of time, in the spring, about 2 months prior to sowing. This seed is stored on open concrete platforms under tarpaulins.

Specialists of the plant protection service, together with workers from the seed inspectorate and enterprise agronomists, annually examine crops for signs of blight. The results of the selection of a crop for seed as well as the analysis of average samples from batches of grain serve as indicators of seed quality; using them specialists of enterprises can evaluate the effectiveness of chemical treatment.

As a result of annual systematic chemical treatment we have fully eliminated covered smut on spring wheat. On barley infections have been noted in the enterprises of Kamyshnenskiy and Leninskiy rayons on an area of 5,000 hectares, which comprises only 3.5 percent of all barley crops; in the remaining 11 rayons of the oblast there have been no signs of covered smut.

The chemical treatment of seed costs 11.4 kopecks per hectare and such expenditures are reimbursed with the preservation of 1 kilogram of grain per hectare. Consequently, there can be no doubt about the profitability and necessity of this work.

For the 1983 harvest 12,000 tons of seed of glumaceous crops were prepared in the fall in the enterprises of Taranovskiy Rayon; in the rest seeds were chemically treated in March. All enterprises were supplied with seed dressing preparation by the associations of Sel'khozkhimiya [Agricultural chemical association]. In each rayon schedules have been set up to medically examine all persons involved in working with pesticides.

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### SNOW RETENTION IN URALSK OBLAST

Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 15 Feb 83 p 1

[Article by B. Uskumbayev, deputy director of the oblast agricultural administration, Uralsk Oblast: "'Snow Sweeps' in the Fields"]

[Excerpts] Under conditions of severe drought the workers of the Ural Kolkhoz, Burlinskiy Rayon, produced an adequate harvest last year. The intensive accumulation of winter moisture helped. This year the kolkhoz's machine operators brought out their snow plows as soon as a considerable snow cover was formed.

A real tandem apparatus--two Kirovets tractors with seven snow plows in between secured by heavy cable--is moving about the fields of the enterprise. The unit was put together following the proposal of brigade leader A. Vasil'chenko. In one trip this type of "snow sweep" will form a plowed strip that is 25 meters wide and rolls 25-30 centimeters high. The economic effectiveness of this is high. Two tractors are made available for other work and less fuel is used. The brigade is now planning to put another "snow sweep" into operation.

In the Transurals, a risk farming zone, the return on an agrotechnical method such as snow retention is always significant. For this reason local farmers always have a serious attitude toward performing snow plowing operations. At the present time 915 snow plows are working in the oblast's fields. Many of them are attached to the powerful K-700 and T-4 tractors.

In the oblast snow is being plowed on an area of over 600,000 hectares now, which is higher than the indicator for last year.

Uralsk farmers can retain snow on 100,000 hectares daily, but they are being hindered by this year's very unstable winter. As a result of the last thaws snow has almost completely melted from the fields in a number of southern rayons--Kaztalovskiy, Urdinskiy, Furmanovskiy and others. But in the northern rayons--Zelenovskiy, Terektinskiy and Burlinskiy--the pace of snow retention work is not slowing down. We hope that the last month of winter will bring more snowfall, and our equipment is in constant readiness.



Since antiquity the people have said, "Snow in the fields--grain in the granaries." This is the banner under which the farmers of the Transurals are working, striving to accumulate moisture for the fields and for the future harvest.

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### EMPHASIS ON SEED IN SPRING SOWING OPERATIONS

Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 19 Apr 83 p 1

[Article by N. Pankina, senior agronomist on seed farming of the oblast agricultural administration, Kokchetav Oblast: "In Search of Varieties"]

[Text] The oblast's farmers are accelerating the pace of preparations for spring sowing. Great significance in this work is being attributed to the entire complex of winter agricultural measures. However, special concern is being shown for seed. As in past years, grain farmers are setting the example in this in Shchuchinskiy Rayon. They have significantly overfulfilled their quota for 2 years of the five-year plan with regard to submitting grain to the state. Among the other factors that raise the productivity of the fields an important role is attributed to seed here. At the present time in the rayon 73 percent of the sowing material has been brought up to the highest condition and the remainder meets second class standards.

In recent years in the oblast a great deal of attention has been focused on the planned introduction into the fields of new and more productive grain varieties. The following example will attest to the great effectiveness of this work. In the Zlatopol'skiy Sovkhoz only Tselinnyy-5 barley is sown. As a result of this in the course of the five-year plan an additional 1 million tons of the quality grain was produced.

The excellent drought-resistant strong wheat variety Tselinnaya-21 is also well-liked by the grain farmers of Kokchetav Oblast. The area in this crop will double this year.

Varieties are also being replaced intensively when it comes to barley. Here the Tselinnyy-5 and Donetsk-8 varieties will be introduced, with the area in each increasing by factors of 1.5 and 2.5 respectively and comprising 70 percent of the total barley area. This work is being done particularly energetically in Shchuchinskiy, Arykbalykskiy, Kzyltuskkiy, Zerendinskiy, Ruzayevskiy and Kuybyshevskiy rayons, where the transition to the new barley varieties is almost complete and where as a result of this there have been solid gains in yield.

The country's Food Program indicates measures to improve seed farming and to introduce into production new and highly productive regionalized



varieties which are more adapted to local conditions. In dealing with this problem the agronomist's service and all of the grain farmers in the oblast are conducting a great search and are striving to make a worthy contribution toward fulfilling the decisions of the May 1982 Plenum of the CPSU Central Committee.

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### BRIEFS

**KHOZRASCHET TEAMS--**Volgograd Oblast--The situation of the khozraschet teams on the Kondrashevskiy sovkhos is typical of many kolkhozes and sovkhoses of Volgograd Oblast. There are 1,600 of these collectives working on the spring fields. They have been assigned 2.6 million hectares, almost half of all the arable land in the oblast. The early spring called the machine operators out into the fields earlier than usual. Time periods for preparing for the spring field work were reduced. But the shortage of time has practically no effect on the course of the field work--the good organization of the khozraschet teams and their high labor productivity are coming to the rescue. The farms of the oblast have fulfilled the plan for planting early grain crops by 70 percent. These plans have been almost completely fulfilled in Kotel'nikovskiy, Chernyshkovskiy and Oktyabr'skiy rayons. While planting is in progress the soil is being cultivated for late spring crops at the same time. In past years a large part of the crop has been "eaten up" by weeds. There are especially large amounts of weeds on the farms of Uryupinskiy, Nekhayevskiy, Kikvidzenskiy and a number of other rayons. The low level of agrotechnology and the poor care given to the fallow areas are having their effect. No special capital investments are necessary to eliminate these shortcomings in the work. Most frequently it is necessary to take a good, efficient attitude toward the land, which is what distinguishes the khozraschet teams now, during planting time. [Excerpts] [Moscow PRAVDA in Russian 16 Apr 83 pl] 11772

**LATE SPRING CROPS--**In Volgograd Oblast, having completed the planting of early spring crops, at the same rapid rate they have continued their work on the fields for late crops. Irrigation farmers are worthily carrying out the hard work; they have conducted the first irrigation of alfalfa and winter crops and several farms have begun the second irrigation. People's and workers' controllers are actively showing their mettle in this year's planting work. Their concern is primarily to achieve good quality in the performance of all agrotechnical operations. An early spring has appeared unexpectedly on the steppes of the lower Volga area. Under these conditions the need more than ever before for promptness, promptness, good organization and self-sacrifice. They cannot succeed otherwise. For responsible goals have been set for Volgograd Oblast--to harvest an average of no less than 20 quintals of grain per hectare, including 25-30 quintals on areas of the southwestern regions. This means that the gross grain yield should reach 7 million tons, and sale of grain to the state--no less than 4.2 million tons. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 21 Apr 83 p 1] 11772

SPRING WORK PLANS--Volgograd Oblast--"The peculiarities of this year's spring field work have to do with the fact that we had no snow during the winter," says the chairman of the Svetloyarskiy Rayon people's control committee, I. Zaytsev. "With the appreciably warmer weather significant supplies of moisture evaporate quickly, especially on solonets soil, of which there is a good deal on our farms. This is why it is so important to cultivate the soil carefully so that the seeds do not end up in dry ground." Attention was given to these and other peculiarities of this year's field work at a conference of the rayon aktiv of people's and workers' controllers that was held on the eve of planting. Gathered in the hall were representatives of 107 people's control groups and posts, trade union activists and members of public commissions of trade unions of the kolkhozes and sovkhoses. And the first days of the work showed that control over such a mobile force is extremely effective. Volgograd farmers are devoted with all their hearts to the fate both of the grain crops and of the feed crops. The shock labor watch in planting work is continuing. [Excerpts] [Moscow TRUD in Russian 5 May 83 p 1] 11772

GREEN HARVEST--Volgograd--The Volgograd farms have begun the first green harvest earlier than usual. Feed production brigades and teams have prepared well for it. They have been assigned more than a million hectares of land in the oblast. Efficient labor organization helps them to cope with the work. The farmers are gratified by the abundant grasses. The majority of collectives are working under a single work order with animal husbandry workers, and the payment for the labor of the feed production teams depends on the quantity and quality of products obtained on the farms and in the complexes. The farmers intend this year to obtain no less than three harvests of grasses from irrigated sections this year. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 20 May 83 p 1] 11772

SOWING OPERATIONS--Tselinograd Oblast--This year spring arrived earlier than usual in the virgin Priishim'ye. But it was not warm at first. The weather was cool for a long time--first the north wind would blow, then there would be frost, followed by protracted cold rains. All the same, farmers always are only happy about rain, and await it at any time because if there is moisture there will be grain. Now thanks to a snowy winter and spring rains the soil has received sufficient moisture. At the present time sowing is in full swing in the virgin lands. It is being conducted strictly according to the recommendations of the All-Union Scientific-Research Institute of the Grain Industry in Shortandakh which always help the workers of Tselinograd Oblast to select the precise tactics for conducting field work. The workers of the Priishim'ye intend to complete sowing during the best period for this region--15-25 May. Each day over 200,000 hectares are added to the spring fields. The machine operators of the main grain-growing rayons--Atbasarskiy, Tselinogradskiy and Astrakhanskiy--were well prepared for field work, as is their custom, and are performing sowing operations at a rapid pace. This year the grain field in the oblast occupies 3 million hectares. It consists primarily of strong and durum wheat varieties. In showing concern about improving its productivity, machine operators brought organic fertilizer out into the fields during the winter, covering an area of almost 2 million hectares. In the virgin lands sowing operations are in full swing. The hum of motors in the steppe does not stop either in the day or night--most Priishim'ye enterprises are conducting sowing operations in two shifts while remembering that a spring day provides food for a year. [By V. Aistov] [Excerpts] [Moscow TRUD in Russian 21 May 83 p 1] 8228

**HARROWING OPERATIONS--Derzhavinskiy Rayon, Turgayskaya Oblast--**The machine operators of the L'vovskiy and Bratolyubovskiy sovkhoses were the first in Derzhavinskiy Rayon to begin selective harrowing. The warm weather in mid-April quickly removed the deep layer of snow from the plowland. A strong wind in the foothills is already raising a fine veil of dust behind the harrowers, but in the lowlands it is still damp. Machine operators must maneuver. It is inconvenient, but moisture is more important. Making use of the warm weather other enterprises are also bringing out their technology. The workers of Derzhavinskiy Rayon must complete early spring work in a short period of time on 377,000 hectares. [By V. Savel'yev] [Excerpts] [Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 13 Feb 83 p 1] 8228

**PRE-SOWING PREPARATIONS--Uralsk Oblast--**On the expanses of the Ilek's left bank machine operators have begun the selective retention of moisture. Tractor operators of the Almaznyy and Chingirlauskiy sovkhoses have brought out their units into the fields. The day is near when mass field work will begin in the region. Of the 220,000 hectares of spring fields this year grains will occupy 195,000 hectares for the first time. Feed crops will be sown on the remainder of the area. In order to complete sowing according to plan in 7-8 work days enterprises have prepared over 600 units composed primarily of stubble sowers. The soil will be prepared for sowing by 246 units in two shifts. Plowed fields in enterprises have been ready since fall. During the winter snow was retained on an area of over 150,000 hectares. Over 80,000 tons of organic fertilizer were moved into the fields. About 4,000 hectares of winter crops were top dressed using land methods. [By S. Akhmetov, first secretary of the Chingirlauskiy raykom of the Kazakhstan CP] [Excerpt] [Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 20 Apr 83 p 1] 8228

**SNOW RETENTION--Kokchetav Oblast--**The spring fields, awakened by the snow, have called to the grain farmers. The farmers of Valikhanovskiy Rayon were first in the oblast to bring out their units. Striving not to lose any of the vital moisture, they are conducting selective retention operations. In the Avangard Sovkhoz, for example, 16 machine operators work 600 and more hectares of plowland daily. Other enterprises are also performing moisture retention operations at a rapid pace. The grain farmers of 11 rayons have already begun this work. At the same time fields are being top-dressed with mineral fertilizer. In the enterprises of Leningradskiy, Enbekshil'derskiy and other rayons the plowing up of old grasses has begun. [By G. Maslov] [Text] [Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 19 Apr 83 p 1] 8228

**SOWING COMPLETED--Alma-Ata, 25 May 83--**The farmers of North Kazakhstan Oblast finished sowing wheat crops today. On the entire area--over 1 million hectares--wheat has been sown in the best agrotechnical time and with high quality. In the struggle to increase the production of wheat grain farmers are depending upon the soil-conservation system of farming and on scientifically-based crop rotations. For the first time wheat is being sown on fallow and as the second crop after fallow, which produces the largest grain yield with high quality seed. All fields are occupied by strong and valuable varieties. One fourth of the area is occupied in highly productive varieties. The area in Almaz durum wheat has doubled. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 26 May 83 p 1] 8228



FIELD PREPARATIONS--Tselinograd Oblast--The last snow is melting from the virgin lands fields. The land, saturated with moisture, is awaiting grain farmers. The farmers of Tselinograd Oblast are the initiators of republic competition for the organized completion of field work. They have done a great deal to greet the spring well-armed. Despite the poor harvest last year the enterprises have a supply of good seed. Of 359,000 tons 325,000 tons were brought up to first and second class. This year the oblast's enterprises will produce twice as much mineral fertilizer as last year in the form of granulated ammophos. These are great riches. They must be used economically. It is very satisfying that most kolkhozes and sovkhoses plan to introduce fertilizer directly into the rows during sowing. [By I. Yavorovskiy] [Text] [Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 13 Feb 83 p 1] 8228

SNOW RETENTION--The republic's farmers are working under the slogan, "Snow in the fields--grain in the granaries." They are forming rolls of snow on the third 10 million hectares. The experience of Kustanayskiy Rayon, Kustanay Oblast, regarding the accumulation of winter moisture has been widely copied; here farmers produced an almost 100 pood grain harvest per hectare last year, which was a drought year. Here they utilize dagi--road snow-clearing units--to repeat the forming of rolls, the height of which now reaches almost 1 meter as a result of the work of such equipment in the Vladimirovskiy and Aleksandrovskiy sovkhoses and at the oblast agricultural test station. After several days the winds fill in the spaces between rolls with snow almost to the top. An excellent way to catch snow is by means of plowland where harrowing has been in the shape of a spiral. Hundreds of enterprises in the republic are already secondarily working the fields with angle bars. In most sovkhoses and kolkhozes technology is being used day and night. [Text] [Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 10 Feb 83 p 1] 8228

READINESS FOR SPRING--Kustanay Oblast--In Kustanay Oblast this was a snowy winter, blowing snowdrifts almost to the very roofs of houses. Now they are basking under the rays of the sun and the snow is settling and forming into streams. Nature is reminding us of the closeness of spring field work. In the oblast preparations began in good time. As usual, during the winter most attention was focused on the repair of equipment. Today its degree of readiness is high. Great help was given to enterprises by the partners of grain farmers--workers of the association Goskomsel'khoztekhnika [State Committee of the Agricultural Equipment Association]. [By L. Kuznetsova, editor of TsBNTI [Central office of scientific and technical information] of the Kazakh SSR Goskomsel'khoztekhnika association] [Excerpt] [Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 10 Mar 83 p 1] 8228

USING TIME WISELY--Kustanay, 25 Apr 83--The fields are awakening. Tractors have moved out into them. The selective retention of moisture has begun. The sowing area for spring crops and grasses in the oblast exceeds 6.5 million hectares. In order to maximally preserve moisture machine operators value every hour, striving to complete work in the shortest time possible. A rapid pace was taken from the beginning. Leading in socialist competition are the farmers of Semiozernyy, Taranovskiy and Komsomol'skiy rayons. About 11,000 units will be involved in moisture retention. They will work no fewer than 930,000 hectares daily. [By I. Puzyrev] [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 26 Apr 83 p 1] 8228

KUSTANAY SPRING--Wheat will occupy 3 million hectares this year in the fields of Kustanay Oblast. The enterprises of North Kazakhstan are striving to precisely fulfill all requirements of the soil-conservation system of farming and to complete sowing in 10 work days. The expansion of the area in fallow and increasing its area to optimal size bring enterprises nearer to the complete assimilation of scientifically-based crop rotations. In these grains are placed after the most favorable predecessors, including almost 800,000 hectares of wheat on fallow and on an area exceeding 500,000 hectares--as the second crop after fallow. Party organizations have done a great deal to extensively utilize brigade contracts. In oblast enterprises sowing is being performed by 730 independent collectives. They have been allocated about 1.5 million hectares of plowland--triple the area of last year. In the oblast now there are 846 sowing complexes working around the clock; they include over 8,000 links. No more than 10 days have been allocated for sowing spring wheat. This must be done on 15-25 May. It is not at all superfluous to remember this now. During the last sowing campaign some enterprises were not able to adhere to the optimal schedule and this affected the harvest. This year the party committees of a number of rayons and RAPO councils calculated the losses resulting from extending the sowing period and drew the necessary conclusions. In the majority of enterprises sowing operations are proceeding according to work plans. [By I. Puzyrev] [Moscow SEL'SKAYA ZHIZN' in Russian 17 May 83 p 1] 8228

OPTIMAL SCHEDULE--Kustanay--The farmers of the largest granary of Kazakhstan today completed the sowing of wheat in optimal time. The main food crop was allocated to the most fertile land with a total area of 3 million hectares. This is two-thirds of the entire grain area. A weighty contribution toward creating a good foundation for the harvest was made by independent links and brigades, which have been allocated almost one-third of all plowland. [Text] [Moscow PRAVDA in Russian 27 May 83 p 2] 8228

MASS SOWING--Kustanay--Oblast farmers yesterday began the mass sowing of millet. This is being done on 170,000 hectares of plowland allocated for this valuable groats crop in the southern zone. The "master" of Kustanay fields is wheat, but added to the glory of the oblast's grain farmers is the glory of its millet farmers--during the 2 past years the state has been sold 77,000 tons of above-quota millet. The concentration of strength in enlarged specialized enterprises and the transition to brigade contracts has helped to increase the return on plowland and to achieve the great results that millet farmers have achieved. [Text] [Moscow TRUD in Russian 17 May 83 p 1] 8228

SOWING COMPLETED--Kustanay, 27 May 83--The farmers of the largest granary of Kazakhstan have completed the sowing of wheat in optimal time. The main food crop here has been allocated the most fertile land with a total area of 3 million hectares. This is two-thirds of the total grain fields. A weighty contribution to laying the foundation for the harvest was made by independent links and brigades, which have been allocated almost one-third of all plowland. This year grain farmers intend that 80 percent of the wheat they sell to the state will be of strong and durum varieties. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 28 May 83 p 1] 8228

CSO: 1824/391

## LIVESTOCK FEED PROCUREMENT

### OVERVIEW OF COARSE, SUCCULENT FEED PROCUREMENT

Moscow SEL'SKAYA ZHIZN' in Russian 17 May 83 p 1

[Article: "More Coarse and Succulent Feed"]

[Text] Feed procurement work has commenced in the southern regions of the country and the grasses have been cut down on hundreds of thousands of hectares. Many farms in the Don River region have made fine preparations for this important work. As early as April, for example, the specialists in Martynovskiy Rayon composed a feed procurement plan which calls for the first cutting to be carried out on an area in excess of 10,000 hectares in no more than 100 working hours. The rayon's workers resolved to procure, in all types of weather, less than one and a half tons of hay, 10 tons of silage and two tons of fodder beets, 32-35 quintals of feed units in all, for each head of livestock.

This initiative warrants dissemination on an extensive scale. This year the country's farms must place in storage succulent and coarse feeds having an overall nutritional value of not less than 134 million tons of feed units -- almost 10 million more tons than last year. This important task can be carried out only if maximum effort is made and full use made of all available potential. And one of the chief reserves will be that of planning the grass harvesting schedules in an efficient manner and carrying out the hay-making work as rapidly as possible.

It bears mentioning once again that despite the scientific data accumulated over a period of many years, data confirmed by leading experience, many farms, just as in the past, are commencing their haying work considerably later than the optimum periods and they are continuing this work for 35-40 or more days instead of the 10-20 days called for. Last year, for example, many farms in Kalinin, Kostroma, Novgorod, Kurgan, Tambov, Vitebsk and a number of other oblasts were late in carrying out their haying work. In Kirov, Lipetsk, Chelyabinsk and Omsk Oblast the initial cutting was not completed until the middle of August.

In organizing a competition among the mowing personnel, the machine operators in some areas are being oriented towards prolonged grass harvesting schedules and thus this work is being carried out on a very tardy basis. Last year, in Kursk Oblast, a month's campaign devoted to procuring feed was not announced



until July, by which time the leading farms had already completed their haying work. Thus it came as no surprise to learn that a considerable portion of the hay and haylage turned out to be of low quality. Moreover, a delay in grass moving operations can lead to a loss of one or two cuttings. Meanwhile, the mistakes made last year are again being repeated this year. In Uzbekistan, for example, the first cutting of alfalfa has already been completed in Surkhan-Darya Oblast, whereas only a small portion of the sown grasses has been cut down in Kashka-Darya, Dzhizak and Bukhara Oblast.

The recommendations by the scientists are plain and simple: the first cutting must commence during the shooting phase to heading of the cereal grasses or budding of the leguminous grasses. This will serve as a signal to commence the hay-making work. It is at this time that the grasses accumulate the greatest amount of nutrients and protein. An early cutting makes it possible to obtain an additional yield and for the country as a whole this represents millions of tons of hay. According to data supplied by the All-Union Scientific Research Institute of Feed, in regions of adequate moisture, the technology for multiple cuttings of grass stands, wherein they are harvested during early phases of development and supplied with fine fertilizer top dressings, makes it possible to carry out 3-4 cuttings and to obtain 80-120 quintals of feed units from each hectare. This is why it is necessary to organize the work so as to obtain two cuttings from those areas where only one was obtained earlier, three where two were obtained and four where three were obtained earlier.

Another rather widespread shortcoming in feed procurement work -- the separation of technological operations, with great pauses taking place between them and with the grasses losing their quality or remaining too long in gang-rows or windrows. All work carried out on the meadows -- from mowing to stacking -- must be carried out in a rhythmic manner and in one flow line. And this means that the amount of grass mown each day should be equal to the amount which a farm is capable of stacking, pressing or placing in haylage trenches during a 24 hour period. Only then will it be possible to obtain high quality feed with a high nutrient content.

This year the grasses in all areas are ripening considerably earlier than usual. In this regard, we must accelerate the preparations for the haymaking work, repair all of the equipment, establish order at the storehouses, build new hay barns and silage and haylage trenches and towers and develop efficient schedules for carrying out the haying work as rapidly as possible. Importance is being attached to training the personnel, defining effective measures for issuing moral and material incentives to them for procuring high quality feed and carrying out all work during the best periods. The RAPO /rayon agro-industrial association/ councils and their working organs -- agricultural administrations -- are obligated to establish effective control over observance of the best periods for harvesting the grasses. Strict technological discipline must be viewed as law in like manner as labor discipline.

The extensive and rapid use in feed production operations of collective contracts will aid in raising the interest of the farmers and machine operators in the production and procurements of high quality feed. At the Kaliningrad Perelesskiy Sovkhoz, for example, two specialized feed procurement detachments

harvested their hay in just 20 working days last year and it was all of high quality. Many such examples of fine operational practice are available. And they all confirm the fact that collective contracts represent a method which is capable of bringing about radical improvements in the production of feed. It interests people in obtaining not only a greater quantity of feed but, in particular, feed of high quality. And this is one of the chief tasks at the present time. All too often the farms are supplied with forage having a low content of nutrients, vitamins and protein. As a result of low-value rations, the farms in a number of republics have sustained shortfalls amounting to hundreds of thousands of tons of milk and meat. The situation must be corrected, the work of improving the quality of all types of feed must become the chief goal of a competition among the procurement specialists and all organizational work concerned with the haying work must be subordinated to this goal.

The use of industrial technologies in feed production will aid in achieving this goal. The drying out of grasses using the forced ventilation method, the pressing of hay, the skilful preparation of haylage and the use of chemical preservatives during ensiling work must all be employed on an extensive scale in all areas. This work is being carried out in a fine manner in Grodno Oblast, where a true production line for the preparation of vitamin-enriched hay has been organized on many farms. High quality haylage is being obtained annually in Brest Oblast and the farms in Estonia, Lithuania and a number of oblasts in the RSFSR and the Ukraine are being supplied with fine quality feed.

A subject of special importance -- the preparation of grass vitamin-protein meal. Fire drying makes it possible to reduce nutrient losses to a minimum, to increase noticeably the nutrient yield from each hectare and to prepare feed which is capable of replacing a considerable portion of the grain in livestock rations and of serving as a fine vitamin-enriched additional feeding for young stock. But such feed can be obtained only if the technology is observed in a strict manner during the drying out of good leguminous grasses. And it is expensive; its preparation involves the consumption of a large amount of fuel. All of this dictates a need for establishing strict order in the use of AVM's /forced ventilation machine/, for exercising constant technological control over their operation and for terminating the processing of raw materials of low nutritional value -- weeds, overripe grasses, which instead of protein-vitamin feed produce chaff which is both expensive and of low nutritional value. The production volumes for grass meal must be determined based upon the requirements for it of the mixed feed industry and kolkhoz, sovkhoz and interfarm mixed feed enterprises.

The grass mowing zone is expanding with each passing day, with only a few days remaining until the mass procurement of feed commences. The farmers and machine operators of kolkhozes and sovkhozes must devote a maximum amount of effort towards ensuring maximum development for feed production and they must improve the feed base in keeping with the number of animals available. This will make it possible to solve the central task of animal husbandry -- to ensure the introduction on an extensive scale in all areas of intensive methods for the production of farm products.

## LIVESTOCK FEED PROCUREMENT

### MORE RATIONAL USE OF MILK PROTEIN URGED

Tallinn SOVETSKAYA ESTONIYA in Russian 15 May 83 p 3

[Article by V. Sergeyev, sector chief, Estonian Affiliate, All-Union Scientific Research Institute for the Study of the Population's Demand for Mass Consumption Goods and the Trade Situation: "More Rationally Use Milk Protein" passages in slantlines in boldface]

[Text] The shortage of feed, especially protein, is one of the basic factors hindering the further development of animal husbandry in the republic. The protein shortage is now especially acute. Analysis shows, however, that the potentials for the more rational use of milk in the republic are far from exhausted.

In the press and in public statements, animal husbandry workers often assert that in recent years there has been a sizable reduction in the return of milk protein to the republic's agriculture, causing a reduction in swine raising productivity. For some reason it is felt that only liquid separated milk (obrat) is returned to the farms. No account is made of the increases in the delivery of milk protein in the form of substitutes for whole milk and dry separated milk in starter feeds.

A psychological factor plays a considerable role in the assertion of this view. Animal husbandry workers themselves put liquid whey into the animals' rations, while the mixed feed industry puts dry separated milk into starter mixed feeds, out of the farmers' view. In addition, the rank and file animal husbandry worker on the farm may not know that there is dry separated milk in the starter mixed feeds, nor believe that it has been included in accordance with established norms. There is grounds for this doubt, for in the first and fourth quarters, when there is not enough dry separated milk, it is replaced in starter feeds by fish, meat, and meat-bone meal, fodder yeast, and other proteins. In any case, animal husbandry workers consider the protein they themselves put into the animals' rations as real, and that in starter mixed feeds as problematic. With each year the quantity of the former declines, and therefore the impression is created that agriculture receives less milk protein. For example, in 1980 the dairy industry delivered agriculture 25 percent less liquid separated milk than in 1975.

However, during this same period there has been a considerable increase in the delivery of whole milk substitutes to farms and of dry separated milk to industry to produce mixed feeds. Overall, industry has returned 4 percent more milk protein to agriculture.

We will now analyze how milk protein is used in agriculture. According to existing norms for the republic, when no starter feeds are used, raising each calf requires 200 kg of whole and 425 kg of nonfat milk, containing 18.4 kg of milk protein. Another variant is possible: here it is sufficient to use 42 kg of starter mixed feeds per calf, less (up to 135 kg) whole milk, but somewhat more (450 kg) nonfat milk. Then each calf receives 17.3 kg of milk protein, not counting protein in starter feeds.

This is the norm, but what about actual consumption. In 1980 the republic's kolkhozes and sovkhoses used about 60 kg of starter mixed feeds per calf. In addition, each calf raised at kolkhozes consumed 427 kg of whole milk and its substitutes and 45' kg of nonfat milk. These contained 26.8 kg of milk protein, one and a half more than the norm. Sovkhoses used 463 kg of whole milk and substitutes and 498 kg of nonfat milk, the milk protein content of which were 1.7-fold higher than the norm.

There is also excessive consumption of milk protein in the raising of young pigs. When 30 kg of starter mixed feeds per head are used, it is possible to raise young pigs without using whole milk. In 1980 the republic's kolkhozes and sovkhoses were delivered about 38 kg of starter feeds per young pig. However, at kolkhozes an additional 26.5 kg of whole milk and substitutes was used per pig, while at sovkhoses the figure was 23.7 kg. In addition, nonfat milk was also used. In total, kolkhozes used 1.4 fold more milk protein per pig than called for by recommended norms, while sovkhoses used 1.5 fold more. This does not include milk protein in starter mixed feeds. Such feeds contained one-fourth of all milk protein essential for raising calves and pigs in the republic.

These data are evidence that the republic has sizable and still irrationally utilized resources of milk protein. In view of the present shortage of this protein for food purposes, its above norm feeding to livestock is inadmissible. The establishment of effective control is the only possibility of avoiding the shortage.

Above norm feeding is also promoted by the fact that milk protein is delivered to agriculture irregularly. Most liquid skim milk is returned to farms in the second and third quarters. It is during these periods that industrial facilities producing dry nonfat milk are operating at full capacity. It immediately goes for the production of starter mixed feeds sent to agriculture. As a result, from April to October milk protein in dry and liquid form is fed to livestock in amounts above the norms, while in the first and fourth quarters there is not enough of it.

In our opinion, dry skim milk produced in the second and third quarters must be accumulated and stored so that it can be used for starter feeds in times



when it is scarce. It is advisable to concentrate dry skim milk at warehouses of the mixed feed industry, which are relatively free during the summer.

The excessive feeding of milk protein is also due to what is in our view a poorly thought-out procedure for utilizing substitutes for whole milk. At present farms receiving whole milk substitutes from the state are not obligated to return to it an equivalent quantity of whole milk. (It is held that this milk is returned in total milk sales to the state). In other words, with the help of state-supplied substitutes farms fulfill their milk sales plans, earning sizable incomes.

Each ton of whole milk substitute costs 900 rubles, while the 8 tons of natural milk which it frees for food purposes costs the state about 2,500 rubles when purchased from the farm. With such a price ratio, farms receive about 1,600 rubles of income per ton of substitute, paying only for its transportation. Naturally, farms have an interest in receiving and feeding the maximum amount of substitute. What this leads to is shown by the following.

In 1980 the republic's agriculture was delivered enough natural milk substitute to completely support the raising of young animals on this product alone. In actuality, however, livestock were fed almost an equal quantity of whole milk. The substitute did not perform its function, but was used as an ordinary protein feed, providing farms additional income.

The interests of the matter require ending this abnormal situation. In order to do this it is necessary to develop and put into law a statute which would forbid the use of whole milk substitute as an ordinary feed, while the state's deliveries of substitute would be viewed as temporary loans, which would have to be repaid to farms. The milk delivered to pay off this loan must not be included in the fulfillment of milk sales to the state. It is essential to expand to whole milk substitute the statute in effect with regard to fodder and seed loans. Of course, this statute should not apply to substitute which can be made at dairy industry enterprises from contributed raw materials of kolkhozes and sovkhoses.

In order to effectively solve the Food Program it seems advisable to do the following: Calculations of agriculture's requirements for milk protein should be based upon standards ensuring the normal raising of young animals including all sources of milk protein: whole milk substitute, dry skim milk, and starter feeds, and prohibiting the above-norm feeding of milk protein to livestock.

As stated, dry skim milk produced from April to October should be used in starter mixed feed only in the first and fourth quarters.

It is essential to bring order to the use of whole milk substitute for its direct function, and to expand the republic's production of grain and pulse crops and other feeds capable of replacing some of the milk protein used in swine raising.

From the Editors:

Ever greater numbers of specialists are pointing to the necessity of reexamining set ideas hindering the use of internal reserves in the agroindustrial complex. In the February issue of KOMMUNIST ESTONII, in his article "On the Internal Potential of the Agroindustrial Complex," Ya. Tepandi, candidate of economics, and senior scientific associate at the ESSR AN Institute of Economics came to conclusions similar to those of the author of this article.

V. Sergyev's article (it completes an entire cycle of his scientific publications on this theme, which have been entered into the competition for the Prize imeni A. Veymer) in our opinion deserves serious examination by the management of the republic's agroindustrial association.

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## LIVESTOCK

### UZBEK DECREE OUTLINES MEASURES FOR DEVELOPMENT OF LIVESTOCK SECTOR

Tashkent SEL'SKOYE KHOZYAYSTVO UZBEKISTANA in Russian No 3, Mar 83 pp 6-8

[Article: 'On Measures for the Further Development of Animal Husbandry in the Republic During the 1983-1985 Period in Light of the Decisions Handed Down During the May and November (1982) Plenums of the CPSU Central Committee']

[Text] After listening to and discussing the report by Candidate-Member of the Politburo of the CPSU Central Committee and 1st secretary of the Central Committee of the Communist Party of Uzbekistan Comrade Sh.R. Rashidov entitled "Measures for the Further Development of Animal Husbandry in the Republic During the 1983-1985 Period in Light of the Decisions Handed Down During the May and November (1982) Plenums of the CPSU Central Committee," the Plenum of the Central Committee of the Communist Party of Uzbekistan notes that as a result of the consistent implementation of the party's agrarian policies and the decisions handed down during the 26th CPSU Congress and the May and November (1982) Plenums of the CPSU Central Committee, agriculture throughout the republic is developing in a stable manner and at a high tempo.

For the third year in a row, the kolkhozes and sovkhoses of Uzbekistan have sold more than 6 million tons of cotton to the state. The plans for selling kenaf, grain, meat, milk, eggs, wool, karakul pelts, silk cocoons and fruit and vegetable products were over-fulfilled. The tasks for 2 years of the current five-year plan were fulfilled successfully. Approximately 270,000 tons of cotton were supplied over and above the plan. Compared to the average annual level for the 10th Five-Year Plan, production on kolkhozes and state farms increased as follows: grain by 27 percent, vegetables by 20 percent, potatoes by a factor of 1.8, and fruit and grapes by 30 percent. Plans for the sale of products to the state and their delivery to the all-union fund were exceeded.

The republic's party organization gave a maximum amount of attention to those problems concerned with carrying out the food program and especially the development of animal husbandry.

In carrying out the decree of the CPSU Central Committee and the USSR Council of Ministers entitled "Measures for Accelerating the Development of Animal Husbandry in the Uzbek SSR" and the decisions handed down during the 14th and subsequent Plenums of the Central Committee of the Communist Party of Uzbekistan concerning animal husbandry problems, the kolkhozes, inter-farm



enterprises and state farms, over the past 3 years, increased their production of meat by 24 percent, milk -- by 21 and eggs -- by 23 percent. Increases have taken place in the numbers of livestock and poultry and their productivity has been raised. The feed base has been strengthened and the quality of the feed improved.

At the same time, the Plenum of the Central Committee of the Communist Party of Uzbekistan believes that the production level achieved for animal husbandry products, especially for meat and milk, is not satisfying the increasing requirements of the workers. There are still many unsolved problems in animal husbandry and full use is still not being made of the reserves and potential available for achieving more intensive development for this branch.

As a result of the low exactingness of farm leaders and specialists and weak executive discipline, the animal husbandry measures developed and approved at plenums of oblast and rayon party committees are not always being carried out. Many farms and individual rayons are not fulfilling their production and procurement plans for meat, milk and other products. The numbers of livestock and poultry are increasing slowly, especially the females in a herd, and their productivity is low. On many farms there is a high level of barrenness and rutting without pregnancies among the cows and heifers. Sufficient use is not being made of the reserves available for increasing meat production through improved grazing and fattening of the livestock and such branches as beef cattle husbandry, sheep raising, horse breeding, camel breeding and rabbit production are developing at a slow pace.

Full use is still not being made of the opportunities available for increasing the production of animal husbandry products on the subsidiary farms of enterprises and organizations and on the private plots of the population. The production and catching of fish are increasing at only a slow rate.

In a number of oblasts and rayons, insufficient measures are being undertaken aimed at strengthening the feed base and intensifying feed production.

The Plenum of the Central Committee of the Communist Party of Uzbekistan believes that serious shortcomings persist in the construction and modernization of livestock complexes, reproducers, farms, poultry factories and other installations. Full use is not being made of the large capital investments being made available by individual construction organizations and the plans for placing installations in operation are not being fulfilled.

The mechanization of labor-intensive operations is being introduced into operations in a weak manner at a number of kolkhozes and sovkhozes and labor productivity is increasing only slowly.

The rural party organizations, soviet and agricultural organs and the professional trade union and komsomol organizations must implement further improvements in the organizational and political work being carried out among the livestock breeders.

The Plenum of the Central Committee of the Communist Party of Uzbekistan decrees:

1. That one of the chief tasks of the party, soviet and agricultural organs of the republic, in addition to developing the production of cotton and other branches of farming, is that of achieving a high tempo for improvements in animal husbandry based upon maximum intensification of the branch, the creation of a stable feed base, more complete use of the production reserves and the introduction into operations of scientific achievements and leading experience.

To approve measures for the further development of animal husbandry in the republic during the 1983-1985 period.

Based upon the above, to raise the production of meat (in live weight) by the end of the 11th Five-Year Plan and at all categories of farms to 950,000 tons annually -- or 1.5 times more, milk to 3.44 million tons -- 1.4 times more and eggs to 2.66 billion -- 1.5 times more than the levels achieved in 1982.

To increase the numbers of all types of livestock and poultry, especially cows, the number of which must be raised to 600,000 head in 1985, or by 30 percent more than the level already achieved. The number of hogs is to be increased by 17 percent, sheep and goats -- by 14 and poultry -- by 42 percent. The productivity of the livestock and poultry is to be raised considerably. Special attention is to be given to the development of feed production. Feed production is to be increased by a factor of 1.7 and raised to 7 million feed units in 1985. The average feed yield per hectare for the republic is to be raised to 85 quintals of feed units.

2. To task the Uzbek SSR Council of Ministers, Gosplan, the ministries of agriculture and the fruit and vegetable industry and Glavseredazirsovkhozstroy with providing the Karakalpak ASSR and the oblasts with tasks, as rapidly as possible, for developing the production base for animal husbandry and for the construction of animal husbandry and other associated installations during the 1983-1985 period. To establish strict control over the fulfillment of these tasks.

The ministries and departments, the oblast, municipal and rayon party committees, the Karakalpak ASSR Council of Ministers, the oblast municipal and rayon executive committees, the agro-industrial associations of oblasts and rayons, the primary party organizations and the republic's professional trade union and komsomol organs must undertake efficient measures aimed at eliminating the shortcomings pointed out in this present decree.

The carrying out of organizational-administrative and ideological-political work among the livestock breeders, directed towards achieving unconditional fulfillment of the measures outlined, must be intensified. The animal husbandry results for the past 2 years must be critically examined from the standpoint of the November (1982) Plenum of the CPSU Central Committee and the positions and conclusions drawn from the speeches by the General Secretary of the CPSU Central Committee Comrade Yu.V. Andropov. In addition, specific measures must be outlined and implemented aimed at achieving more complete utilization of all reserves and opportunities for increasing the production of meat, milk, feed and other products.

To improve the operations of the livestock complexes, farms, poultry factories and inter-farm enterprises in conformity with the measures outlined and to

ensure the highly efficient use of the land, logistical resources, equipment and labor resources. To accelerate the organizational-administrative strengthening and construction of new grain-animal husbandry sovkhoses and to intensify in every possible way the production of grain and animal husbandry and other products at these facilities.

To consider the chief task in animal husbandry, in addition to growth in output production, to be that of increasing the numbers of livestock and poultry, especially brood stock, raising their productivity to the maximum possible degree and improving reproduction of the herd. To wage a decisive campaign against barrenness in the female stock, to improve breeding work sharply and to organize the artificial insemination of agricultural animals in an efficient and planned manner. Special attention must be given to improving and shortening the fattening periods and to raising considerably the daily weight increases and the live weights of livestock sold for meat purposes.

To ensure the intensive development of hog raising, poultry production, sheep raising, camel breeding, horse breeding, rabbit raising and also fish husbandry.

The Uzbek Ministry of Agriculture must undertake additional practical measures aimed at improving the work of Uzzhivprom, Uzkarakul'prom, their complexes and sovkhoses and provide them with more assistance in developing the production-technical base. To expand the capabilities of the fattening sites for sheep such that fattening will be ensured for all of the meat animals. Improvements should be realized in the weight increases and live weights of livestock to be sold for meat purposes through the more extensive introduction into operations of progressive technologies and the livestock fattening periods should be shortened considerably.

The Council of Ministers, Gosplan and the Ministry of Agriculture of the Uzbek SSR must furnish definite assistance in improving the work of Uzptitseprom, accelerating the placing in operation of poultry factories and breeding reproducers which are under construction and they must solve in a more rapid manner the problems concerned with more complete support for the poultry factories in the form of internally produced incubation eggs.

3. The Plenum of the Central Committee of the Communist Party of Uzbekistan has assigned a very important and urgent task to the party, soviet and agricultural organs, to the leaders and specialists of kolkhoses, sovkhoses and interfarm enterprises and to the subsidiary farms of enterprises and organizations -- to create a strong feed base for animal husbandry and in all areas to convert feed production over to an independent and specialized basis. To expand the areas considerably, to raise in every possible way the crop yield of alfalfa, corn for grain and silage and to increase the secondary and intermediate sowings of forage crops. To improve the organization of the green production line and the procurement of hay by means of shade drying and also preserved and fermented feeds. Special attention must be given to improving the pastures and raising their productivity through the sowing of wild-growing forage crops.

Progressive technologies must be employed extensively in feed production and in the procurement and processing of feed. Substantial facilities must be

created on each farm for silage, haylage and the storing of hay and feed preparation shops must also be available on each farm. The quality of the feed must be improved.

The ministries of agriculture and the fruit and vegetable industry, Glavredazirsovkhozstroy, the oblast and rayon party committees, the Council of Ministers of the Karakalpak ASSR, the oblast and rayon executive committees and the agroindustrial associations of oblasts and rayons must ensure the development of comprehensive feed production programs at each farm and exercise strict control over their fulfillment, so as to ensure the availability of diverse types of high quality feed.

The Ministry of Procurements must undertake measures aimed at raising considerably the quality of the mixed feed being produced and it must furnish more assistance to the kolkhozes, sovkhoses and other farms in the production of mixed feeds.

4. The Ministry of Construction, the Ministry of Rural Construction, Uzkolkhozstroy, the ministries of agriculture and the fruit and vegetable industry, Glavredazirsovkhozstroy and Goskomsel'khoztekhnika of the Uzbek SSR must ensure the timely fulfillment of the tasks associated with the construction of new and the modernization of existing animal husbandry farms, complexes, poultry factories, feed production enterprises and other facilities associated with the development of animal husbandry, planned for 1983 and the subsequent years of the five-year plan.

5. The Ministry of Land Reclamation and Water Management of the Uzbek SSR, Glavredazirsovkhozstroy and other ministries and departments engaged in the development of land must ensure leading rates for the placing in operation of new irrigated lands for grain-animal husbandry sovkhoses and other animal husbandry farms called for in the plan for 1983-1985.

Goskomsel'khoztekhnika, jointly with the ministries of agriculture and the fruit and vegetable industry of the Uzbek SSR and Glavredazirsovkhozstroy must achieve radical improvements in the work of installing equipment and providing technical services for animal husbandry farms, complexes and poultry factories and in supplying logistical resources for the construction and modernization of animal husbandry installations.

5. The Ministry of Meat and Dairy Industry of the Uzbek SSR must improve the organization of livestock and milk procurements, expand the network of receiving points and ensure that they are located as close as possible to the production areas. Raise the responsibility of the procurement organs and enterprises for the timely acceptance and preservation of the products, accelerate the conversion over to direct contacts with the kolkhozes, sovkhoses and other farms, introduce completely during the 1983-1985 period the acceptance of livestock, poultry and milk directly at the republic's farms and to ensure that they are shipped by means of specialized transport belonging to the procurement organizations.

6. The oblast, municipal and rayon party committees, the Council of Ministers of the Karakalpak ASSR, the oblast, municipal and rayon executive committees



and the ministries and departments must intensify their work of creating and expanding subsidiary farms at enterprises and organizations, achieve more complete utilization of the reserves and opportunities available for increasing the production of animal husbandry products on these farms, increase considerably the production of goods on the fattening farms of Uzbekbriyashu and the republic's Ministry of Trade and provide them with maximum assistance in acquiring livestock, young poultry and feed and in obtaining land for forage crops and also agricultural equipment. More attention must be given to the development of animal husbandry operations on the private plots of the population, particularly those of kolkhoz members and sovkhos workers, with maximum assistance being provided to them in this regard.

7. The oblast and rayon party committees, the primary party organizations of farms and the komsomol organs must constantly implement improvements in the style and methods being employed for carrying out organizational and political work in the rural areas, they must improve the placement of communists and ensure that they play a leading role in the decisive sectors of the campaign to implement the party's program for carrying out the food program, they must raise the responsibility of the farm leaders for the carrying out of the plans and obligations, they must strengthen labor and executive discipline in the collectives and they must wage a decisive campaign against all manifestations of mismanagement and poor organization.

To improve the selection and placement of animal husbandry personnel, to strengthen the party structure among them, to create spirited party and komsomol organizations or groups on each farm and at each animal husbandry enterprise, to develop and raise the effectiveness of the socialist competition and to manifest constant concern for improving the working and living conditions for the livestock breeders. To raise the level of organization for the training and retraining of animal husbandry personnel, especially middle echelon workers.

Using all means of mass information, propaganda and agitation, as well as the system of party-political education and general economic training, to study thoroughly the tasks arising from the decree of the present plenum and to achieve active participation by the livestock breeders and all workers in implementing the measures aimed at further developing animal husbandry throughout the republic.

The Plenum of the Central Committee of the Communist Party of Uzbekistan expresses the confidence that the communists and all of the republic's workers will devote all of their knowledge, energy and expertise to carrying out in an honorable manner the tasks of the current year and the five-year plan as a whole, ensure fulfillment of the measures for accelerating the development of animal husbandry and make a worthy contribution towards carrying out the decisions handed down during the 26th party congress and the May and November (1982) Plenums of the CPSU Central Committee.

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## REGIONAL DEVELOPMENT

### KEY PROBLEMS FOR DEVELOPMENT OF APK, FOOD PROGRAM IN KAZAKH SSR

Alma Ata NARODNOYE KHOZYAYSTVO KAZAKHSTANA in Russian No 2, Feb 83 pp 9-15

[Article by L.P. Pyatkov, chief of Agriculture Department of Gosplan Kazakh SSR, "Key Tasks of the Agrarian Complex"]

[Text] The USSR Food Program is a most important constituent part of our party's economic strategy for the present decade. A ponderable contribution to its realization will be made by all the republics, krais, oblasts, rayons and each sector of the national economy. A significant role in the accomplishment of the program belongs to Kazakhstan.

The 8th Plenum of the Central Committee of the Communist Party of Kazakhstan approved the Kazakh SSR Food Program for the period to 1990.

An essentially new step was taken in the system of planning and in management of the socialist economy. The food program embodies a goal-oriented, complex approach to the solution of this most important problem. The main feature of such an approach is that the operation of agriculture and the sectors of industry, transport and trade serving it is coordinated and unified. All their work is subordinated to a common end aim--production of high-quality food products and having them reach the consumer.

In the compilation of the draft of the Kazakh SSR Food Program, republic planning organs took an active part. This work has been positively evaluated by Gosplan USSR.

We have asked L.P. Pyatkov, chief of the Agriculture Department of Gosplan Kazakh SSR to describe the key tasks and current problems relating to realization of Kazakhstan's food program.

Kazakhstan's agroindustrial complex plays an important role in the republic's economy. Thirty-three percent of the economy's fixed capital is concentrated in it; it employs 38 percent of the workers and creates approximately 40 percent of the republic's national income. Multisectorial agriculture constitutes the basis of the agrarian sector.

Workers employed in agriculture and in other related sectors have achieved undoubted results. At the same time, the food problem has still not been removed from the agenda. There is a need for improving the structure of nutrition. The demand of the population for a number of goods, especially for meat and dairy products, is still not being completely satisfied. The food program approved by the 8th Plenum of the Central Committee of the Communist Party of Kazakhstan is aimed at further raising agriculture and other sectors of the agroindustrial complex of the republic. Its practical realization presupposes more effective utilization of the existing production and economic potential and the attainment of end results both directly in agriculture and in the entire agroindustrial complex of the republic.

A key problem in agriculture continues to be accelerated and stable growth of grain production. During the 11th Five-Year Plan, its average annual production will increase to 28-29 million tons and during the 12th Five-Year Plan to 30.5-31.5 million tons. It is planned to achieve stable growth of gross yields of wheat of the hard and hardy varieties. By 1990, production and purchases of such grain will be double compared to 1985. Gross yields of winter rye, millet and buckwheat will increase. Production of leguminous crops will grow significantly. Their sowings will increase more than fourfold.

During the current decade, sowings of oil-yielding crops, especially of rape and soybeans, will be expanded. It is planned by 1990 to have production of rape seeds reach 210,000-230,000 tons and that of soybean 120,000-150,000 tons. The chief way of attaining these goals is through all-out upgrading of standards of farming, improvement of selection and seedgrowing and introduction of progressive technologies.

The food program designates measures for significantly increasing yields of potatoes, vegetables and melon crops. The task has been set of completely satisfying the population during the current five-year period in regard to potatoes through own production and in regard to vegetables and by 1990 in regard to vegetables and melon crops. The delivery of fruit and berry crops and grapes will increase by more than 1.5-fold.

It is planned to stabilize the growth of industrial crops and to adopt decisive measures for the struggle against damages to sowings by root rot. Taking into consideration planned production volumes and raw materials brought in, the task has been set to completely satisfy the population of the republic during the current five-year period in regard to sugar and vegetable fats on the level of rational norms.

Responsible tasks have been set before animal-husbandry workers. During the 11th Five-Year Plan, average yearly meat production (dressed weight) should reach 1.2-1.3 million tons and during the 12th Five-Year Plan--no less than 1.4 million tons, milk, correspondingly, 4.9-5.4 million tons and eggs--3.6-4.0 billion each. The efforts of scientific-research institutions and agricultural enterprises are directed at the development and putting into practice of intensive methods of operating animal husbandry, inducing a significant rise in the productivity of all forms of livestock and poultry.



By the end of the 12th Five-Year Plan, consumption of meat and meat products, compared, to 1980, will have grown 29 percent, of milk and dairy products--32 percent and of eggs--27 percent.

In the future, the number of cattle should amount to 9.4 million head and beef production--more than 600,000 tons (dressed weight) versus 464,000 tons in 1980.

In addition to the overall growth of the number of cattle, stress will be put on intensive development of meat cattle raising.

Today this sector is essentially concentrated in the western, central and partly in the southern oblasts of the republic. There is an emerging need for the creation of animal-husbandry farms and specialized farms in the northern and eastern oblasts and for the further spread of interfarm cooperation in the rearing and fattening of cattle.

At the present time, 2,120 sovkhoses and kolkhoses are engaged in the production of beef, 217 of them are specialized. A total of 168 specialized farm associations engaged in rearing and fattening of young cattle stock on an industrial basis unite more than 1,200 shareholder farms. The concentration of fattening of cattle in specialized associations has significantly raised the effectiveness of the sector as a whole. Whereas prior to their organization in 1975, the average delivery weight of steers, reared at enterprises within the system of the Ministry of Agriculture, was 330 kg, at the present time it exceeds 400 kg, while the relative share of animals of the highest nutritional state among the head of cattle increased from 51 to 75 percent.

Cattle fattening has been ably organized (on an interfarm basis) at the Yermantausskiy Rayon Specialized Farm Association in Tselinograd Oblast. In 1981, 7,000 steers were delivered to meat combines with an average weight in excess of half a ton. Average daily weight increase was 505 grams, 12.8 quintals of fodder units went to make a weight increase of 1 quintal, while labor outlays amounted to 13.8 man-hours. The cost of a weight increase of 1 quintal is 184 rubles. In the course of the year, the association made about 3.4 million rubles of profit.

Two hundred fifty specialized sovkhoses and kolkhoses have been created for providing the republic's population with milk. In this sector, it is important to further increase the concentration of female stock, to increase the productivity of cows and maximally to convert production to an industrial basis through modernization of existing animal-husbandry farms and construction of new complexes. The task is to bring up average yearly milk yield to 3,000-5,000 kg per cow on farms in suburban areas.

Sheep raising in the republic is engaged in by 1,240 sovkhoses and kolkhoses, of which 610 sovkhoses and 71 kolkhoses are specialized. They produce 75 percent of mutton, 77 percent of the wool and 90 percent of karakul.

During the present five-year plan, there will spring up 50 new sheep-growing sovkhozes (on land of sovkhozes broken up into smaller units and on state reserve land) and 10 new specialized sovkhozes on whose irrigated land fodder will be produced for the sheep. A total of 4.2 billion rubles of capital investment is being allocated for the comprehensive development of the sector.

In the balance of meat resources of the republic's food program, a big place is occupied by pork. By 1990 pigs will number 3,600,000. Sixty-four specialized farms are now engaged in pig raising. In addition, 7 complexes, which have 249,000 of the animals, have also set up industrial production output.

In the course of the five-year period 3 swine complexes will be built for 54,000 pigs each and one for 12,000 pigs. It is planned to create animal-husbandry farms on large sovkhozes located close to meat combines and railroads. On the whole, pig production will increase 1.4-fold in the forthcoming decade.

Specialized associations on an interfarm basis will receive further development. Seven such pig-raising associations have already been established in five oblasts. They involve 36 sovkhozes. Here definite positive methods have been accumulated for increasing production output and at the same time reducing material and labor outlays.

The complexes that have been started up possess large resources. Take, for example, the Volynskiy Swine-Raising Complex. In 1981, there were produced here 104,000 piglets. Gross weight increase amounted to 10,000 tons. Average daily weight increases exceed 400 g. For one quintal of them, there are expended 4.9 quintals of food units, 3.2 man-hours of labor. Pork sales for the year produced 2.4 million rubles of profit.

A task has been set for poultry growing of fully satisfying the egg and poultry needs of the republic. A leading role in this sector is played by the Kazptitseprom system where 47 poultry-growing production associations include 49 poultry factories and poultry sovkhozes and 15 incubator-poultry growing stations. Specialization, concentration and the introduction of industrial methods ensure a high growth rate in production output and labor productivity. At the present time, the associations supply more than 97 percent of the eggs and more than 83 percent of the total volume of poultry meat for the republic.

The construction is planned of new poultry factories for 19 million head of poultry per year and the expansion of capacities to 13.3 million head. This will make it possible to increase production of poultry meat by almost 1.5-fold.

The food program devotes necessary attention to higher rates of development of herd horse raising, camel raising, antler-deer raising and beekeeping.

Measures have been provided for a significant increase in the share of subsidiary rural farms of enterprises and organizations as well as for the creation of conditions for the further strengthening of private subsidiary farms. The task has been set as follows: each family living in rural areas should and could have its own yard and maintain livestock and poultry.

Successful development of animal husbandry is unthinkable without a solid fodder base. At the present time, disproportions exist between the growth rate of the number of animals and fodder production; disparities are to be found between the amount of produced food substances, the presence of protein in them and the volume of procured fodder and the capacity of fodder storage facilities.

In the republic, 10 million hectares of plowland are taken up with fodder crops. In the years ahead, further expansion is planned of their sowing on irrigated land. During the current and the 12th Five-Year Plan, it is planned to put to use for this purpose about 600,000 hectares of new irrigated land for fodder production, to irrigate 22 million hectares of pastureland, to reconstruct water-management structures on 56-60 million hectares of previously irrigated pastureland and to improve the technical condition of 400,000 hectares of estuary systems of irrigation.

Irrigation farming will be significantly developed in Pavlodar and Semipalatinsk oblasts in the basin of the Irtysh River, whose water resources are still not being adequately used. It is planned to carry out here complex construction of the Pavlodar right-bank, Zhelezinskiy, Lebyazhinskiy and Beskaragayskiy irrigation areas. The land growth along these areas will be used mainly for strengthening of the fodder base.

It is planned to do a large volume of work in connection with raising the productivity of natural fodder land through the radical improvement of haying and the creation of cultivated pasturages. As confirmed by practice, the biggest fodder production reserves are particularly to be found in the use of the wealth of natural pasturages. Their radical improvement will provide 4,000-5,000 fodder units per hectare and 12,000-15,000 with irrigation. In the present decade, this work will be continued and expanded within the general scheme of utilization of desert and semidesert pasturages of Kazakhstan developed in accordance with the complex program of intensification of fodder production on natural fodder lands. It is planned to carry out radical improvement of natural fodder lands on an area of 8-8.5 million hectares. Unslackening attention is being given to the provision of balance of fodder with regard to protein and other components and improvement of their quality.

The food program provides for an increase in the procurement and storage of fodder according to the new and latest technologies with the use of preservatives, which will permit the retention of up to 20-25 percent of already produced nutrients. Additional capacities for silage and haylage storage will be increased 12 million tons and for grass flour, briquetted and granulated feeds--almost 1 million tons. Measures are designated for increasing the transformation coefficient of nutrients in animal-husbandry products, which at the present time is still low.

As shown by calculations, the republic as a whole possesses everything necessary for satisfying the requirements of animal husbandry in regard to full-value feeds. This provides the possibility of fully utilizing the genetic productivity potential of animals and sharply increasing the production of animal husbandry products.

The mixed-feed industry will undergo considerable development. During the 11th Five-Year Plan, capacities of mixed-feed enterprises will grow. New plants will be erected. Subsequently, growth of capacities will occur both at state enterprises and on sovkhozes and kolkhozes. We have in mind accelerated construction and expansion of the network of small-capacity enterprises located close to the consumer so as to double deliveries of mixed feeds by 1990. Production of feeds of animal origin will grow--of whole-milk substitute (ZTsM), dry skimmed milk (SOM) and others.

The adopted food program provides a broad system of measures for the struggle against losses of agricultural products and improvement of their use. Rational, economical utilization of material resources and the elimination of any forms of loss are of paramount importance at this time.

We lose an inordinate number of products because we still have not learned how to well preserve the people's property. We suffer losses because of the carelessness of some workers and because of poor organization of shipments and storage of products.

With the present level of agriculture, it is possible to significantly increase the food and raw material stocks of the republic. Thus better use and improved storage of grain will increase its end output by 20-25 percent and of vegetables, fruits and potatoes by 30 percent and of meat and milk by 10-15 percent. These are big reserves, their size covers designated absolute production growths of individual products during the 11th Five-Year Plan. In the course of the decade, it is planned to put into operation additional capacities for the storage of grain, potatoes and vegetables. The capacities of refrigeration facilities will be increased 1.5-fold. Progressive methods will be widely used to store sugar beet, vegetables and fruits involving the employment of biologically active substances, new kinds of coverings, automatic regulation of temperature and humidity and of potatoes and vegetables--with the employment of active ventilation.

We know that products of good quality ensure a high degree of satisfaction of requirements with reduced expenditure of them. In this connection, measures are planned for raising the quality and degree of utilization of agricultural raw materials. Work is being expanded on increasing the sugar content of beets. It is planned through reduction of losses of raw materials and improved technology to produce during the decade more than 3,000 tons of additional granulated sugar and to reduce outlays on its production by 1.5 million rubles.

There will be a growth of the capacities of the processing industry producing fruit and vegetable canned goods. At the present time, the question is being resolved of construction of small-capacity shops on kolkhozes and sovkhozes of the republic for processing of vegetables.

The meat and dairy industry faces serious problems. Here it is necessary to expand, to modernize and to build new capacities for processing cattle and milk taking into consideration the local features of individual rayons.



Questions of effective use of technical resources are becoming increasingly important. The engineering service is being strengthened and its responsibilities are being increased. The material-technical base is being further developed on kolkhozes and sovkhozes, in the system of the State Committee for Selkhoz-tekhnika for servicing and repair of the machine-tractor park and provision of machine-tool, forging and pressing equipment for repair shops, repair enterprises and technical-service stations.

For the development of the republic's agroindustrial complex, 16.3 billion rubles are being allocated during the 11th Five-Year Plan and 17.7 billion rubles during the 12th Five-Year Plan, including 15.4 billion rubles and 16.7 billion rubles, respectively, for agriculture. During the present decade, the agrarian sector is to receive about 300,000 tractors, 230,000 trucks, 180,000 grain-harvesting combines and other agricultural equipment. The consumption of electric power is growing.

The republic possesses modern agricultural machine building as well as machine building for animal husbandry and fodder production. The volume of sales of machines and equipment for agriculture will have increased 1.4-fold by 1990. New capacities will go into operation for the production of agricultural machinery, spare parts for tractors, cast steel and other products.

During the current decade, output of tractors is to increase 1.2-fold and production of agricultural equipment--1.9-fold. Highly effective anti-erosion equipment will be developed.

An essentially new direction in agricultural machine building is production of equipment for working of solonchaks. Because it is lacking, large areas of solonchak land are not being used at the present time. But in the immediate years ahead Kazakhstan must develop and put into use 2 million hectares of solonchak land essentially for fodder production. The equipment required for this will be produced by Tselinogradsel'mash Production Association.

The further development of Kyzylordarismash Plant is planned for assuring production of rice-cultivating equipment. By 1990, the volume of its industrial production will have increased tenfold.

The volume of machine-building production for animal husbandry and fodder production during the 11th Five-Year Plan will double and during the 12th Five-Year Plan it will increase another 1.8-fold. The production of machinery and equipment for mechanization of work in sheep raising through development of the Aktyubinsksel'mash and Mankentzhivmash plants will be expanded. Production will be established of the wide-span KSP-10 mowing machines at the Tselinograd Iron-Foundry Plant.

In 1985, the republic's agriculture will be provided with 889,000 tons of mineral fertilizers. Together with the increase in quantity, assortment will be modified and the quality of mineral fertilizers will be enhanced.

Measures have been outlined for the creation on kolkhozes and sovkhozes as well as at organizations of Kazsel'khozkhimiya a needed material-technical base for



chemicalization. The construction of warehouses, stations for technical servicing of machines, runways, manure-storage facilities and other facilities is being expanded. This will make it possible to reduce losses of fertilizer, plant-protection agents and other chemical products during transportation, storage and application on soil.

A significant contribution will be made by science to boosting agricultural production and the agroindustrial complex.

There is a need for promising scientific ideas and great purposefulness in the work of scientists as well as concentration of resources on key directions of development of the national economy.

During the current decade, the Kazakh SSR Academy of Sciences, the Eastern Division of the All-Union Academy of Agricultural Sciences, the Kazakh SSR Ministry of Agriculture, the Kazakh SSR Ministry of Fruit and Vegetable Industry and other ministries and departments have the responsibility of speeding up and putting into practice the achievements of science, developing a network of scientific-production associations on a base of agricultural and industrial enterprises, scientific-research and design organizations and concentrating in them production of quality and hybrid seeds and sowing material of the highest reproduction as well as rearing of pedigree livestock.

Among measures for scientifically assuring the fulfillment of the Food Program, a special place is given to studies on improvement of the economic mechanism of management. First of all, studies are being expanded to improve the planning and operation of the agroindustrial complex, increase the yield of capital investment and material resources and increase the incentive of all parts of the complex for high end results.

Measures for rural social reorganization constitute an organic part of the food program. We have in mind the construction of housing with modern conveniences, essentially of the homestead type, with yard structures for private subsidiary farming. The construction of schools, children's preschool institutions and clubs will be expanded. Medical, trade and consumer services will be improved. During the 11th Five-Year Plan it is planned for these ends to construct dwellings with a total floorspace of not less than 13.7 million square meters and during the 12th Five-Year Plan--16 million square meters on sovkhozes, kolkhozes and other agricultural enterprises of the republic. There is also planned expansion of individual construction of dwellings on sovkhozes and kolkhozes. The plans designate the allocation for these purposes of necessary construction materials to provide all manner of help to builders with financial and material resources.

During the present 10-year period, the need for general educational schools in rural localities of the republic will be fully satisfied.

It is planned to set up reliable transport connections for farms with rayon centers. This will require during the 10-year period the construction of something like 1,200 km of general-use motor roads and about 3,000 km of intra-farm roads. The extent of rural buslines will be increased in a planned manner

so that by 1990 all central farmsteads of sovkhoses and kolkhoses will have bus connections to rayon centers.

The May (1982) plenum designated a system of measures for improving the operation of agroindustrial complexes and perfecting the economic mechanism. It will be necessary to reduce the outlay of material resources per unit of agricultural production as well as losses of all its forms. By 1990 labor productivity on sovkhoses and kolkhoses will increase approximately 1.5-fold and the production of agricultural products per hectare of land used--by not less than one-third.

At the present time, workers of the agrarian sector of Kazakhstan's economy are concentrating their efforts on key problems of development of the agroindustrial complex and on the systematic realization of the food program.

Of course, its realization is not a one-year job. But its fulfillment must not be delayed, it was pointed out at the November (1982) Plenum of the CPSU Central Committee. And it is a matter of honor for the workers of the industrial complex of the republic to work in such a way that these tremendous resources provide a return even today and still more tomorrow.

At the present time, the success of the work will be determined by organizational, political and ideological work, greater discipline and responsibility for the implementation of the entire complex of measures developed by the 26th party congress and the May and November (1982) plenums of the CPSU Central Committee.

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## AGRO-ECONOMICS AND ORGANIZATION

### ECONOMIC FACTORS AFFECTING DEVELOPMENT OF KOLKHOZES, SOVKHOZES

Moscow EKONOMICHESKIYE NAUKI in Russian No 3, Mar 83 pp 105-111

[Article by V. Semenov, doctor of economics: "Economic Factors in the Stable Development of Kolkhozes and Sovkhozes"]

[Text] The contemporary stage of the development of Soviet society is characterized by ever greater utilization of the enormous possibilities and advantages of developed socialism. The systematic improvement of social relationships is materializing, and the problem of the raising of the material and cultural standards of living of the people is being solved. As V. I. Lenin pointed out: "The entire art of government and politics consists in the timely learning and knowing where to concentrate one's chief powers and attention."<sup>1</sup> Being guided by this directive, the CPSU devotes particular attention to the further rise of agriculture--a most important link in the development of the socialist economy; on this the raising of the level of national well-being is greatly dependent on it. The basis for the solution of large-scale problems for the improvement of procurement of food products for the population and industrial raw materials was set forth by the program accepted by the March 1965 Plenum of the CPSU Central Committee for the development of agriculture, this program was strengthened and developed at subsequent plenums and Party congresses. The CPSU has developed an orderly system of economic and organizational measures which have specified in a broad, comprehensive and long-range program for the rise of agriculture. This system stems from the fact that agricultural policy is an inseparable part of the general course of the CPSU, and the development of agriculture must be considered organically related to the entire economic and social policy of the Party at the contemporary stage of development of communist society.

The period elapsed after the March 1965 Plenum of the CPSU Central Committee has confirmed very clearly that the agricultural policy adopted in our country is the basis for the dynamic rise of agriculture and the entire agro-industrial complex (APK) of the country. Capital investments in sectors of the APK have grown significantly. Their dynamics for 1961-1980 are characterized by the following data (Cf. Table I).

Table I. Capital investments in APK sectors, in billions of rubles

|                       | <u>1961-<br/>1965</u> | <u>1966-<br/>1970</u> | <u>1971-<br/>1975</u> | <u>1976-<br/>1980</u> |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Total                 | 64.7                  | 106.3                 | 165.0                 | 241.9                 |
| Including Agriculture | 48.2                  | 81.2                  | 131.1                 | 173.2                 |

Along with this, there have appeared in agricultural economics in recent years negative tendencies, expressed by the more and more rapid growth in expenses of production compared with the increase in agricultural production (Cf. Table 2).

Table 2. Increase in the prime cost of agricultural production in kolkhozes and sovkhoses in 1980 compared to 1964

| <u>Categories of expenses</u>                                         | <u>Billion in Rubles</u> | <u>percent</u> |
|-----------------------------------------------------------------------|--------------------------|----------------|
| Labor salaries                                                        | 7.7                      | 16             |
| Use of industrial goods for<br>agricultural industrialization         | 13.3                     | 28             |
| Amortization deductions                                               | 4.3                      | 9              |
| Insurance payments, credit and<br>other expenses                      | 6.3                      | 13             |
| Expenses for diesel fuel, spare parts,<br>mixed feed, tariff payments | 6.1                      | 12             |
| Total                                                                 | 37.7                     |                |

Agriculture in the USSR is conducted, as is known, under mixed natural climatic conditions. Grain and other agricultural crops are often sown in zones which are "risky" for agriculture; this is particularly apparent in the 70s, when the weather was extremely bad for agriculture. In addition, the results of agricultural production are negatively affected by non-production losses, the disruption of the agro-technology of the cultivation of agricultural products and the zootechnological conditions for maintaining animals and deficiencies in the organization of administration. Capital investments and material-technical resources directed to this sector do not as yet yield the promised return, with the result that the economic potential of agriculture is incompletely utilized.

The growth of production expenses, despite the rise of purchase prices, has led to the lowering of profitability of kolkhoz and sovkhos production. It should be noted, however, that the rise in prices of diesel fuel, spare parts, mixed feed and tariffs for automotive transport, although it has increased the prime cost of agricultural production, has not affected its profitability. This rise in prices was completely compensated for by the rise in purchase prices for grain crops, sugar beets, milk and other agricultural products.

The profitability of agricultural production decreased from 24 percent in the Eighth to 6 percent in the Ninth Five Year Plan. In 1980, 50 percent of kolkhozes and sovkhoses incurred losses. In 1980 losses were incurred for sugar beets, milk, meat and wool. As a result, the indebtedness of many agricultural enterprises in terms of loans from the USSR State Bank grew to 112 billion rubles. The low profitability of kolkhoz and sovkhos production does not create an incentive to increase the production of agricultural products and restrains further development of the APK. Under these conditions the effect of cost accounting stimuli on the development of agricultural production has been weakened.

Considering all these circumstances and proceeding from the decisions of the 26th CPSU Congress, there have been developed "active, large-scale measures directed toward the removal of difficulties and disproportions which have arisen, the rise of the effectiveness of agricultural production and the satisfaction of the growing demand of the country for food products."<sup>2</sup> They have been incorporated into the USSR Food Program for the period to 1990 adopted at the May 1982 Plenum of the CPSU Central Committee. Among the basic directions of realization of the Food Program, particular attention is paid to a group of measures directed toward the improvement of administration, planning and economic stimuli in all sectors of the APK, having as their goal the maximum orientation of production to the achievement of high final results. The measures developed by the CPSU for cleaning up the economic environment in the countryside "by their dimensions, the depth of the effects on all kolkhozes and sovkhoses without exception...represent as a whole a most significant economic-political action."<sup>3</sup> Within these measures, great significance has been attributed to raising the economy of low-profit kolkhozes and sovkhoses. By the decisions of the May 1982 Plenum of the CPSU Central Committee, low-profit kolkhozes and sovkhoses are freed from repayment of earlier delayed and unsecured debts from bank loans on a scale of 9.7 billion rubles (Cf Table 3). The cancellation of this indebtedness was carried out at the expense of surplus funds of the Union budget from previous years. In addition, such kolkhozes and sovkhoses are granted deferment of bank loans for 10 years with their liquidation beginning in 1990.

Table 3. Contraction and deferment of debts by kolkhozes and sovkhoses for bank loans, in billions of rubles

|           | <u>Contracted<br/>debt</u> | <u>Deferred<br/>debt</u> | <u>Total</u> |
|-----------|----------------------------|--------------------------|--------------|
| Kolkhozes | 4.8                        | 6.4                      | 11.2         |
| Sovkhoses | 4.9                        | 4.7                      | 9.6          |
| Total     | 9.7                        | 11.1                     | 20.8         |

Low-profit and unprofitable kolkhozes and sovkhoses are also freed from payment of bank interest for deferred debts, which permits them to use freed resources in the amount of 0.4 billion rubles for broadening production.



Especially significant for the strengthening of the economy of kolkhozes and sovkhoses and the improvement of their relations with the state is the new order of payment by kolkhozes of the income tax and by sovkhoses--payments for deductions from profits. Kolkhozes now pay income tax based on net income, not at a single rate of .3 percent, as before, and a differentiated one, depending on profitability. The tax rate is now .1 percent for each percent for profitability of 25-30 percent, .2 percent from 30-40 percent, .4 percent from 40-50 percent, .5 percent for more than 50 percent, but not more than 25 percent of the taxable net income. In addition, the income tax is levied on part of the labor payment fund of the farmers (an amount exceeding 70 rubles per month for each kolkhoz worker). In this case the income tax rate is fixed the same as for those working on state enterprises, in the amount of 8 percent. However, if workers and employees pay the tax directly from personal income, the income tax on the labor payment fund of the kolkhoz farmers is borne by the kolkhozes.

The differentiated rates for assessment of the income tax on taxable net income of kolkhozes and the non-taxable minimum of the labor payment fund of kolkhoz farmers at the rate of 70 rubles per month were introduced beginning with calculation of the payment amount for the 4th quarter of 1982--according to the estimated income of kolkhozes for the year. The final calculation of the income tax is figured according to yearly accounts.

Thus the new system of income tax payment lowers its impact on less-profitable farms and raises it for more profitable ones. Simultaneously a new non-taxable minimum of income tax payment is being established according to a labor payment fund of 70 rubles instead of 60. The kolkhozes can direct the additional gain in the amount of 0.1 billion rubles to expanding production.

Also changed is the system of payments put into the budget by the sovkhoses. Now it is the same as for kolkhozes and is based on the amount of net income instead of the earlier established payments for fixed production capital in the agricultural category of the rate of 1 percent. The payment of deductions in the budget of sovkhoses is figured in a decentralized system locally according to data of the annual bookkeeping account.

These changes reflect the objective processes of the closeness of two forms of socialist property--kolkhoz-cooperative and public. By means of the new payment rates the state to a certain degree realizes a differential rent, formed as a result of better soil fertility and additional investments through the state budget and bank credits. These payments, however, although they are made according to individual farms and are substantial, as a whole comprise only a total of 2 percent of receipts from product sales.

In the decisions of the May 1982 Plenum of the CPSU Central Committee great significance was attributed to the creation of a more stable economic position of kolkhozes and sovkhoses on the basis of improving price formation with the goal of introducing effective cost accounting, securing production expansion through personal resources, timely repayment of loans, increasing the material incentive of kolkhozes and sovkhoses to increase production and sale to the state of agricultural products. For these purposes on 1 January 1983 purchase

prices for grain, sugar beets, potatoes, cattle, pigs, milk and other types of products were raised, and additions to prices for these types of products were established for low-profit and unprofitable kolkhozes and sovkhoses. A total of 16 billion rubles were allotted for this, including 6 billion rubles for increases in purchase prices and 10 billion rubles for additions to purchase prices.

In addition, purchase prices were increased by another 5 billion rubles. At the same time compensation paid to kolkhozes and sovkhoses from resources of the state budget was changed to cover rises in prices caused by the rise in gasoline price in 1978 and wholesale prices for industrial production and tariffs on electrical and heat energy (on 1 January 1982).

The system of compensation to agriculture for price differences was quite complex. In addition, in such a system all kolkhozes and sovkhoses received subsidies from the state budget regardless of the level of profitability, capital-labor ratio, and presence of fixed capital. Thus the change in the compensation system and corresponding increase in purchase prices with their further differentiation create conditions for strengthening the economy of kolkhozes and sovkhoses which have disadvantageous production conditions. The allocation of state resources, apportioned in connection with changes in price formation for agricultural products, is given in Table 4.

Table 4. Allocation of resources apportioned from the state budget to raise purchase prices and establish price additions for low-profit and unprofitable kolkhozes and sovkhoses, in percent

| <u>Type of product</u> | <u>Rise of<br/>purchase<br/>prices</u> | <u>Additions<br/>to prices</u> | <u>Total</u> |
|------------------------|----------------------------------------|--------------------------------|--------------|
| Milk                   | 24.6                                   | 23.8                           | 24.3         |
| Cattle and poultry     | 33.6                                   | 55.0                           | 42.6         |
| Wool                   | 3.3                                    | 3.9                            | 3.6          |
| Grain                  | 9.5                                    | 7.5                            | 8.6          |
| Sugar beets            | 8.5                                    | 2.4                            | 5.6          |
| Potatoes               | 1.4                                    | 1.6                            | 1.5          |
| Vegetables             | 2.5                                    | 2.0                            | 2.2          |
| Raw Cotton             | 5.6                                    | 0.9                            | 3.4          |
| Other production       | 11.0                                   | 1.9                            | 8.2          |
| Total                  | 100.0                                  | 100.0                          | 100.0        |

Thus, out of the total of 21 billion rubles allotted for raising purchase prices and establishing additions to them, 11 billion rubles are allotted for raising purchase prices and 10 billion rubles to establishing price additions for low-profit and unprofitable kolkhozes and sovkhoses. Of this, livestock production receives, 61.5 percent of the appropriations allocated for raising purchase prices, and 83.7 percent of the resources allocated for price additions. As a result, the profitability of the production of animal husbandry products rises to 20 percent.

It should be emphasized that the payment of additions to purchase prices for agricultural products sold to the state by low-profit and unprofitable kolkhozes and sovkhoses is made by procurement organizations through the payment of accounts. Appropriations for the payment of price additions are determined according to union republics in accordance with the volume of agricultural products sold to the state by low-profit and unprofitable kolkhozes and sovkhoses. In union republics these additions are determined according to oblasts and rayons. On the basis of reports of rayon agro-industrial associations, the oblast agro-industrial associations allocate appropriations for payment of additions by rayon and establish lists of low-profit and unprofitable kolkhozes and sovkhoses to which these additions are paid. The latter are designated by rayon agro-industrial associations according to types of products. In the event of overfulfillment of the plan for sale of certain types of agricultural products to the state, kolkhozes and sovkhoses receive greater additions to prices.

Thus, the payment of additions to purchase prices for agricultural products sold to the state by low-profit and unprofitable kolkhozes and sovkhoses is made to stimulate increased production. In addition, this system is aimed at strengthening the economy of farms with insufficient fixed capital, and in unfavorable production circumstances.

To stimulate an increase in the sale of agricultural products to the state, great significance was given to the introduction in 1981 of a payment of a 50 percent addition to purchase prices for sale to the state of products above the level achieved in the 10th Five Year Plan. This addition is established for the volume of products calculated as the difference between the products actually sold to the state in each year of the 11th Five Year Plan and the average annual level of its sales for the years 1976-1980. On the basis of the plan for the sale of products to the state in 1981 this addition was determined at the level of 4 billion rubles.

The realization of these measures, while preserving the stability of retail prices, requires subsidies from the budget to cover the difference between state expenditures for the purchase of livestock products and retail prices (Cf Table 5).

Table 5. Excess of state expenditures for purchase of livestock products above retail prices, in rubles/kg

|                            | <u>Beef</u> | <u>Mutton</u> | <u>Pork</u> | <u>Milk</u> | <u>Butter</u> |
|----------------------------|-------------|---------------|-------------|-------------|---------------|
| Retail price               | 1.75        | 1.39          | 1.85        | 0.24        | 3.40          |
| State expenditures in 1980 | 3.79        | 3.33          | 2.72        | 0.33        | 6.20          |
| Loss:                      |             |               |             |             |               |
| Rubles                     | 2.04        | 1.94          | 0.87        | 0.09        | 2.80          |
| percent                    | 117         | 140           | 47          | 38          | 82            |

(table 5 continued on next page)

(table 5 continued)

|                                             | <u>Beef</u> | <u>Mutton</u> | <u>Pork</u> | <u>Milk</u> | <u>Butter</u> |
|---------------------------------------------|-------------|---------------|-------------|-------------|---------------|
| State expenditures in 1983<br>(calculation) | 4.74        | 4.16          | 3.40        | 0.41        | 7.78          |
| Loss:                                       |             |               |             |             |               |
| Rubles                                      | 2.99        | 2.77          | 1.55        | 0.17        | 4.38          |
| Percent                                     | 171         | 199           | 84          | 71          | 129           |

The compensation for the difference between purchase and retail prices for purchase of agricultural products in 1983 will come to 42.5 billion rubles, or 12 percent of the expenditures of the state budget, as opposed to 25.1 billion rubles, or 8.5 percent of the state budget disbursements in 1980. In this case the state budget for 1983 appropriates 4.3 billion rubles for compensation for the difference between industrial wholesale prices for tractors, combines, agricultural machines and mineral fertilizers and the prices at which they are sold to kolkhozes and sovkhoses. This type of subsidy arose in connection with the rise in wholesale prices for industrial production in 1967 and 1982.

In the matter of achieving an upswing in kolkhoz economy great significance is attributed to financing special-purpose programs in low-profit and unprofitable kolkhozes from 1983. In accordance with the decisions of the May 1982 Plenum of the CPSU Central Committee for kolkhozes which have insufficient fixed capital and do not possess their own resources for expanded reproduction; the procedure for financing established for sovkhoses has been extended through state budget resources for the following planned expenditures: the construction of residences, children's pre-school institutions, clubs and other cultural-domestic projects, and municipal services, and also farm roads. At state expense low-profit and unprofitable kolkhozes now have children's pre-school and cultural-educational institutions and Pioneer camps; expenditures are being made to acquire cultural and domestic goods and equipment and to conduct mass-cultural work. The present system on sovkhoses for payments for property insurance at the expense of the state budget has been extended to low-profit and unprofitable kolkhozes.

The financing of special-purpose programs on low-profit kolkhozes from the state budget is accomplished according to a list determined by union republic councils of ministers. Budget financing of special-purpose programs is extended to farms having for the last three years a total profit (the relation of net profit to the prime cost of products sold) of no more than 10 percent. Kolkhozes with a higher, but which have not secured liquidation, using their own resources, of earlier received State Bank credits and the financing of capital investments and other planned measures, can also be financed from the budget if they have inadequate fixed capital and have insufficient net income. Lists of low-profit and unprofitable kolkhozes are established for a number of years. As levels of profitability and fixed capital changes, these lists should be updated.



Expenditures for financing special-purpose programs in low-profit kolkhozes are provided for in union republic budgets yearly in the amount of 3.3 billion rubles. The distribution of these grants by republics is conducted by the Union Kolkhoz Council. Grants for the construction of roads and cultural-domestic projects are transferred to kolkhozes by rayon agro-industrial complexes within the limits of the estimated cost of the projects and the limit of capital investments allocated to low-profit kolkhozes insured by technical-material resources. The financing of the upkeep of children's pre-school and cultural-educational institutions and Pioneer camps, expenditures for acquiring cultural and domestic goods and equipment and conducting mass-cultural work are realized within norms established for state agricultural enterprises. Rayon agro-industrial associations transfer to remaining kolkhozes grants for compensation to their expenses for property insurance. Grants allocated in union republic budgets for financing special programs are distributed by the financial organs of agro-industrial associations, which transfer them to the budget accounts of low-profit kolkhozes. The financing of special-purpose programs on low-profit kolkhozes is realized taking into account their economic and financial condition and the presence of their own resources. Such a system opens up possibilities for solving social problems on economically weak farms, retaining employees, increasing the production and sale of products to the state, and strengthening the economy of farms in general.

The May 1982 Plenum of the CPSU Central Committee posed the task of decisively improving the work by strengthening kolkhozes and sovkhozes with highly qualified personnel. Particular attention was paid to increasing the prestige of managers and specialists and their role in improving social production and styles and methods of management. The plenum pointed to the necessity of developing and encouraging the initiative of workers, employees and specialists and increasing their personal responsibility for implementing the decisions of party and government, adhering to planned, financial and technological discipline and improving the activity of each kolkhoz and sovkhoz. The initiative of specialists expressing a desire for work transfer from organs of administration and areas of services into agriculture and directly into kolkhozes has been approved.

In the interests of retaining specialists in the country and increasing their material involvement, official salaries of those managing workers, specialists and sovkhoz employees have been raised by an average of 30 percent. The raising of salaries will be accomplished in stages: in 1983--in the regions of Siberia, the Far East, the Urals, the Non-Chernozem zone and the Central Chernozem region of the RSFSR; in 1984--in other regions of the RSFSR; in the Belorussian and Kazakh SSRs; in 1985--in all other regions of the country.

The decision to apply as of 1 January 1983 the system and conditions of payment of bonuses for uninterrupted service on a given farm, established for tractor drivers and machinists, i.e., in the amount of 25 percent of their salary, to workers engaged in animal husbandry on sovkhozes and other state agricultural enterprises is very important to retaining personnel.



Supplementary leave has been specified for workers of stock raising sovkhozes and other agricultural enterprises in the same amounts as for tractor drivers and machinists, i.e., a period of 6 days. The calculation of the length of service for granting supplementary leave for uninterrupted length of service is made as of 1 January 1980. Workers on sovkhozes and other state agricultural enterprises also come under rayon coefficients for salary established for workers on farms located in Sverdlovsk, Perm and other oblasts. Data on the amounts of financial aid given by the state for the purposes of agricultural development are shown in Table 6.

Table 6. Financial aid given by the state for agricultural development in accordance with decisions of 1965, 1970 and 1982 plenums of the CPSU Central Committee in billions of rubles.

|                                                                                                                                                       | By decisions<br>of the March<br><u>1965 Plenum</u> | By decisions<br>of the July<br><u>1970 Plenum</u> | By decisions<br>of the May<br><u>1982 Plenum</u> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|---------------------------------------------------|--------------------------------------------------|
| State expenditures for raising<br>purchase prices and fulfill-<br>ing other measures for strength-<br>ening the economy of kolkhozes<br>and sovkhozes | 3.9                                                | 4.3                                               | 21.6                                             |
| Lowering the indebtedness for<br>bank loans                                                                                                           | 2.0                                                | 7.3                                               | 9.7                                              |
| Granting postponements for the<br>liquidation of unsecured loans<br>from banks                                                                        | 2.0                                                | 4.0                                               | 11.1                                             |
| Measures for retaining personnel<br>and stimulating an increase in<br>production                                                                      | 0.1                                                | --                                                | 1.8                                              |
| Total                                                                                                                                                 | 8.0                                                | 15.6                                              | 44.2                                             |
| Including annually                                                                                                                                    | 4.0                                                | 4.3                                               | 23.4                                             |

The May 1982 Plenum of the CPSU Central Committee adopted major measures designed to effect a basic transformation in the administration of agricultural production and to strengthen the economy of kolkhozes and sovkhozes, to create for them the necessary conditions for increasing productivity and the sale of agricultural products. Great significance in this respect is attributed to improving relationships with enterprises serving agriculture and increasing their involvement in the final results of the work of kolkhozes and sovkhozes. These relations must be built on a strict cost accounting basis and mutual responsibility, excluding the possibility of unjustifiably high profits in some cases and losses in others. In this respect one must have in mind increasing the material incentive of enterprises, and organizations serving agriculture, in improving quality and in observing deadlines

for work being done and services rendered, strengthening the incentive of agricultural partners in achieving high results of agricultural productivity and the processing of its products, in introducing them to consumers, in the growth of the economic effectiveness of kolkhozes and sovkhoses. In the interests of increasing the responsibility of procurement organizations for the more complete utilization of increased agricultural production, improvement of storage, processing and delivery to consumers, they have been directed to complete by 1985 the transition to direct acceptance on kolkhozes and sovkhoses and to the shipping livestock, poultry, milk, potatoes, vegetables, fruits, berries and grapes from the farm using their own transport.

The realization of the Food Program requires guaranteeing the transition to planning the work of the agro-industrial complex and administering it as a whole on all levels and achieving a balanced development and close interaction of branches of the APK. The program provides for the simplification of the organizational structure of the administration of the APK, liquidating superfluous and duplicative links, significantly curtailing the size of the administrative apparatus, increasing the responsibility of each link of the APK for increasing the volume of production, increasing the quality of food-stuffs and raw materials for industry, for the organization of reliable and uninterrupted provision of all types of food-stuffs to the population.

Raising the purchase prices, financing special-purpose programs on low-profit kolkhozes, changing the system of payment of income tax from kolkhozes and payments in the budgets of sovkhoses, and also increasing the material incentive of agricultural workers to increase the productivity--all this makes possible the strengthening of the financial position of kolkhozes and sovkhoses, creates conditions for the introduction of genuine cost accounting, for increasing the responsibility of kolkhozes and sovkhoses for the final results of their work.

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#### FOOTNOTES

1. Lenin, V I, "Complete Works," Vol 40, p 85.
2. USSR Food Program for the Period to 1990 and Measures for Its Realization. "Materials of the May Plenum of the CPSU Central Committee, 1982", Moscow 1982, p 10
3. IBID., p 18.

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## AGRO-ECONOMICS AND ORGANIZATION

### PROGRESS, PROBLEMS IN IMPROVING GRAIN QUALITY

Moscow EKONOMIKA SEL'SKOGO KHOZYAYSTVA in Russian No 5, Apr 83 pp 10-15

[Article by Aleksandr Semenovich Baranov, docent of the All-Russian Institute for Upgrading the Training of Agricultural Management Workers and Specialists: "Improving Grain Quality--Source for Increasing Grain Resources"]

[Text] Improving the quality of agricultural products under contemporary conditions becomes more and more important since it is equivalent to supplementary production output even as labor and material resources remain unaltered. In connection with this strain renewal and strain seed farming are extremely important. Let's take wheat as an example. The grain of soft varieties is used for bread baking, of strong varieties--to improve the bread-baking properties of other wheat varieties, and of hard varieties--to produce groats and confectionery goods. In protein and gluten content and indicators strong and ~~durum~~ wheats are high in quality. However, it should be remembered that pasta flour cannot be made from all ~~durum~~ wheats. For this purpose only ~~durum~~ varieties with a gluten content of no less than 25 percent and a quality no lower than group two must be used.

According to VASKhNIL [Academy of Agricultural Sciences imeni V.I. Lenin] data, during the last several decades agricultural crop varieties have been changed 3-4 times on the country's fields. Obsolete varieties have been replaced by more productive varieties that are more resistant to unfavorable weather conditions, pests and diseases. Almost all of the area allocated for grains is sown in regionalized varieties that have passed state tests.

Soviet agricultural science has had great success in breeding agricultural crops, especially winter wheat and sunflowers. Highly productive varieties of winter wheat such as Bezostaya-1, Avrora, Kavkaz as well as Mironovskaya Yubileynaya, Odesskaya-51 and others have become world famous. Under normal production conditions these varieties yield 50-60 quintals per hectare of grain. Breeders have developed valuable varieties of spring wheat, winter rye, barley and rice of the intensive type. With new varieties of winter and spring crops it is possible to maneuver crop sowing depending on developing weather conditions.

It has been calculated that simply by improving seed farming and introducing new and highly productive varieties of grain and legume crops into production

it would be possible already today to produce additionally no fewer than 10 million tons of grain. It is sufficient to note that the extensive introduction of only Bezostaya-1 yields an annual increase in the harvest of over 3.5 million tons of grain.

However, grain quality varies widely among different regions of the country, kolkhozes and sovkhozes. Thus, the gluten content in wheat grain varies from 12-14 to 30-32 percent and for this reason improvements in quality are of great national economic significance. It has been calculated that a 1 percent increase in protein content in wheat grain will yield an additional 600,000 tons of vegetable protein. This is enough to supply 16 million persons with full-value protein for a year.

The wheat fields of the homeland are extensive, occupying over 60 million hectares. This main food crop of our country is cultivated in various soil and climactic zones. A great deal of artistry is required of farmers to grow a large harvest and to produce good-quality seed. There are production zones in which natural conditions facilitate the labor of farmers, as if helping them produce large harvests of high-protein wheats if they utilize the proper agrotechnology. These zones include parts of Kazakhstan, Western Siberia, the southern Urals, the Transvolga and the Ukraine. It is in these regions that the most qualitatively valuable strong and hard wheats, necessary for the production of high-quality breads, rolls and pastas, are produced. The further increase in grain production and improvement in its quality are an integral part of the USSR Foodstuffs Program.

In the production and procurement of food grain an important place belongs to durum wheat. Russian durum wheats have been well-known on the world market for their high quality for a long time. They were the initial material for breeding these crops in the USA and Canada. It is difficult to overestimate the significance of durum class wheats. They are the irreplaceable raw materials for producing flour of a special pasta grind. This flour is used to make high-quality long macaroni. For this the grain of durum wheat is needed which in quality must meet the standards for first class, i.e. a grain unit of no fewer than 770 grams, a gluten content of no less than 28 percent (no lower than group 2 in quality), and the admixture of other types of wheats may not exceed 10 percent.

The state has a high demand for the grain of durum and good-quality wheats. In order to increase the production and procurement of durum wheats economic stimuli have been developed--for grain corresponding to first-class quality standards the procurement price exceeds the price for strong wheat by 100 percent, second class--by 70 percent and third class--by 20 percent. Seed of third-class quality durum wheat is paid for at a price that exceeds the price of soft wheat by 10 percent in those oblasts, krays and autonomous republics that have been assigned plans for the procurement of durum wheats.

In practical terms what is the significance of the quality class? With the same yield one hectare of durum wheat of the first class is equal in price to the cost of 2 hectares of soft wheat, 1.8 hectares of poor quality durum wheat and almost 1.7 hectares of third class durum wheat.

According to the calculations of scientists, under conditions existing in Siberia clear income from the sale of 1 ton of soft wheat grain (based on procurement prices in effect during the 10th Five-Year Plan) comprised an average of 58 rubles, strong wheat--88 rubles and first class durum wheat--115 rubles. By decreasing the area in durum wheat and replacing it with soft an enterprise could have lost up to 66 rubles of clear income per curtailed hectare.

The enormous economic effectiveness of raising the grain quality of durum wheat is evident and it is confirmed through numerous examples from the practical experience of kolkhozes and sovkhoses. However, these advantages of durum good-quality wheats are not yet sufficiently propagandized or introduced into production.

In all of the main regions cultivating durum wheat there are many enterprises whose experience deserves attention, support and dissemination. These enterprises not only achieve large harvests but good seed quality as well on the basis of realizing a complex of agrotechnical and organizational-economic measures. They receive considerable supplementary payments for the sale of good quality grain to the state.

Tavrisheskiy Rayon of Omsk Oblast can serve as a convincing example of the cultivation of good-quality durum wheats--in 1980 the enterprises of this rayon produced 27.8 quintals per hectare on each of 7,500 hectares of the Almaz durum wheat variety developed by SibNIISKhoz [Siberian Scientific-Research Agricultural Institute] and sold the state 7,800 tons of good quality seed. For the high quality of these wheats they received monetary supplements averaging 95 rubles 60 kopecks per ton, which comprised about 90 percent of the basic procurement price. In striving to successfully fulfill the decisions of the 26th CPSU Congress the farmers of Omsk Oblast plan to double the sowing area in durum wheat by the end of the 11th Five-Year Plan.

The improvement of seed quality is a very important problem for Kazakhstan--the earnings from the sale of grain to the state in 1976-1980 comprised 77 percent of the cost of marketable farming products and over 31 percent of all agricultural production. The profit level from grain production is double that from other agricultural products in the republic's sovkhoses. On the average for 1971-1980 it comprised 60.5 percent, including 71.3 percent in the sovkhoses of Northern Kazakhstan (during very productive years the profit level surpassed 100 percent). Nevertheless, the effectiveness of the grain industry on the whole would have been significantly greater if grain quality had been better. At the present time the situation is such, unfortunately, that a number of the republic's kolkhozes and sovkhoses suffer losses from the sale of non-conditioned grain.

It is clear that reserves for improving the quality of grain and consequently for a growth in its production effectiveness include expanding the sowing area and increasing the productivity and quality of durum and strong varieties. For example, the actual earnings from the sale of 1 ton of durum wheat grain in the rayons of Northern Kazakhstan on the average for



1976-1980 comprised 11.28 rubles, strong--10.17 and soft--7.83 rubles. It turned out that the procurement price for durum wheat grain was 44 percent higher and for strong wheat grain--30 percent higher than for soft wheat. Expenditures for cultivating durum wheat were only 15-18 percent higher. With productivity being equal, the profitability of cultivating durum and strong wheats was higher by 18-20 percent than that of soft varieties.

The kolkhozes and sovkhozes of Kustanay Oblast are doing extensive work to improve the quality of grain--the proportion of durum and strong wheat grain sold on the average in 1976-1980 exceeds 30 percent of the total amount of marketable grain; supplementary payments by procurement organizations for high-quality grain comprised an average per year of 62.9 million rubles. According to calculations using these resources it is possible to reimburse expenditures for the production of 36 percent of the total amount of marketable grain produced in the oblast.

Of great importance is a precise determination of grain quality for the grain that is sold to the state--if a 1 percent error is made when determining gluten content the amount of the supplement to the price drops from 30 to 10 percent for strong wheat and from 50 to 30 percent for durum wheat.

The spring wheat that is cultivated in Tselinograd Oblast has no equals in the country when it comes to the quality of the grain and the strength of the flour. One of the main suppliers of high-quality wheat grain is the Krasnoyarskiy Sovkhoz. The effectiveness of grain production in this enterprise is the greatest in the oblast--on the average for 1976-1980 the profit level was 189.3 percent as compared to 80.7 percent in Tselinogradskiy Rayon as a whole and 57.9 percent in Tselinograd Oblast.

The utilization of a system of material incentives played a big role in improving the quality of grain in the Krasnoyarskiy Sovkhoz. The high level of the average sales price in this enterprise was the result of the great supplements for large grain unit, grain quality and above-plan sales. The supplement for 1 quintal of sold grain was 6.2 rubles, or 80 percent of the procurement price (3.6 rubles or 53 percent on the average in the oblasts' sovkhozes). At the same time because of its low general condition, the volume of the recorded grain mass in oblast enterprises was 95.8 percent and for this reason grain-reception enterprises annually collected payments from them totalling 3,635,000 rubles for drying and cleaning the grain.

The existing system of evaluating and paying for wheat sold to the state depending on its quality has a significant stimulating effect on the production of high-quality wheat. For example, in 1976-1980 the kolkhozes and sovkhozes of Saratov Oblast received over 60 million rubles in the form of supplements for grain quality. The kolkhozes and sovkhozes of Yershovskiy Rayon sell over 70 percent of their grain as strong and durum varieties of wheat. The enterprises of Ivanteyevskiy and Dergachevskiy rayons receive millions of rubles in supplements for high quality wheat.

The kolkhozes and sovkhoses of Serafimovichskiy Rayon, Volgograd Oblast, sold 10,400 tons of durum quality wheat during the 10th Five-Year Plan and overfulfilled the procurement plan by 48 percent. In submitting quality seed the enterprises received 154 rubles per ton in addition to supplements for quality, or 66 percent over the procurement price for soft wheat. In Frolovskiy Rayon of the same oblast the five-year plan for the procurement of durum quality wheats was overfulfilled by 182 percent. The Archedinskii Sovkhoz achieved the highest indicators in the rayon--it fulfilled the plan for the sale of durum quality wheats to the state by more than double, receiving 197 rubles per ton of quality wheat (in addition to the supplement for quality), or over double the amount of procurement prices for soft wheat. Unfortunately, the experience of these enterprises has not been disseminated and the oblast fulfilled its plan for the procurement of quality wheats by only 63 percent during the 10th Five-Year Plan.

The food and industrial value of grain as well as other agricultural products depends directly on variety, agrotechnology, climactic factors, the struggle against pests and agricultural diseases and the conditions, methods and schedules for harvesting operations, post-harvest processing, transportation and storage.

In order to obtain standard quality flour it is essential that wheat have good technological (milling and bread baking) properties in addition to certain indicators of moisture and weed and grain admixtures. In particular, the grain unit must be 750 grams or more, which is the base norm and which enables us to produce the planned (75-78 percent) quantity of flour. We know that a decrease in the grain unit of 1 gram results in a decrease in the output of flour of 0.11 percent. In order to produce flour of the highest and first classes the minimal norm for translucence in durum wheats is 60 percent. Wheat that is earmarked for use as bread-baking flour must have a gluten content of no less than 25 percent.

At the present time 92 percent of the total quality flour belongs to the highest, first and second classes and for this reason the production of quality flour must increase.

The actual quality of wheat grain reaching state granaries does not always meet the necessary requirements in a number of regions of the country. In 1976-1980 the wheat unit fluctuated from 740 to 765 grams. The wheat that was best in grain unit during the 10th Five-Year Plan was procured in the Moldavian SSR, the Ukrainian SSR, the Kazakh SSR, Krasnodar and Stavropol' krais and Kuybyshev and Rostov oblasts. The quantity of gluten in wheat also fluctuated sharply and for this reason in order to produce standard quality flour the grain of durum wheats was added as an ameliorative agent to wheat grain with a gluten content of less than 25 percent.

In addition to wheat that is low according to grain unit and gluten content the state receives batches of wheat with an increased content of germinated, unripe, frostbitten and other seed lacking full value as a result of violations of the rules of cultivation and optimal harvesting schedules.

In order to produce high quality grain it is very important to protect plants in time against chinch bugs. The negative effects on the industrial properties of the grain result from the fact that when the pest penetrates the grain in addition to his saliva, enzymes enter the grain and dilute the gluten, decreasing its quality, and this is why the physical properties of the dough deteriorate. In order to improve grain quality it is very important not to allow premature harvesting or crushing in the course of threshing. Puny wheat with a grain unit of less than 6<sup>50</sup> grams is reimbursed at 15 percent less; with a grain unit of up to 600 grams--with a 30 percent reduction.

According to data from the Krasnodarsk Scientific-Research Institute of Agriculture imeni P. I. Luk'yanenko, the best scientifically-based harvesting schedule, in the course of which winter wheat yield does not drop, is 5 calendar days. Lags of 4-5 days over the aforementioned schedule result in losses of up to 2 quintals per hectare; of 10 days--up to 4 quintals per hectare.

An improvement in grain quality is the most important factor in raising the profitability of its production and for this reason it is essential to more extensively utilize the system of preliminary evaluations of the grain quality of strong and durum wheats. The joint work of farm specialists, agricultural specialists from rayispolkoms and representatives of grain-reception enterprises to evaluate certain plots with cultivated wheat ready for harvesting on them significantly ease and accelerate the reception of strong and durum wheat grain, facilitates the correct mixing of high-quality batches of grain in enterprises for shipment to elevators and facilitates controls over the evaluation of grain quality. This is attested to by the experience of enterprises in Krasnodar and Stavropol krais and Rostov Oblast.

In recent years the area in wheat has been increasing while that in rye has been decreasing in the Non-Chernozem Region of the RSFSR, in the forest steppe and western oblasts of the Ukraine, in Belorussia and in the republics of the Baltic. But the wheat that is produced here does not have the flour milling and bread baking properties that are essential for the production of bread baking flour. At the same time, the rye that is produced here is usually of good quality. It is used to make primarily three types of flour--scoured, sifted and dressed, which are utilized for the preparation of a wide assortment of breads. Rye bread is often more in demand by consumers than wheat bread in this and other regions of the country.

In recent years the volume of production and procurement of rice has grown significantly in the country. However, the quality of the raw rice arriving in state granaries is not high in many cases--the raw rice contains immature and green grains; their content sometimes comprises 6 percent and they are very difficult to separate from the normal grains. For this reason with the processing of the raw material the quality of the groats produced decreases and the product is sold with weeds (kurmak [Translation unknown]). When raw rice of a low quality is processed the output of crushed groats increases. They become more difficult to store and are 1.6 times less expensive than groats of the highest and first classes. Tests of the industrial properties of various rice varieties showed that the content of

crushed kernels in groats depended not only on the harvesting technology but also on the variety that was cultivated.

All is not well with the quality of corn either--the quantity of traumatized grain (grain admixtures) reaches 10-20 percent at delivery. This sharply decreases the quality of the product. Even for the starch-syrup industry GOST foresees the delivery of corn with a grain admixture of no more than 7 percent; for the groats industry--2 percent; and for the flour milling industry--no more than 3 percent.

Our designers and engineers of agricultural machine building have a great deal of work before them to improve the threshing units of combines in order to curtail the traumatization of grain during threshing to a minimum, especially for crops such as rice, corn and millet.

Grain-reception enterprises continue to receive grain with an elevated blight content (harmful admixture) and with a content of millet grains infected with smut (contaminated). Grain that is over 1 percent blighted is accepted as defective for a 25 percent lower procurement price and with the above-plan sales of blighted millet the 50-percent supplement is not paid out. The state must utilize such grain only for industrial purposes. The production and sale to the state of such millet are explained by a poor organization of crop protection against blight and by the use of untreated seed for cultivation, which is intolerable.

In our country the demand for corn grows with each passing year. This is primarily related to the development of the mixed fodder industry. The mixed-fodder recipes for poultry includes 30 percent corn; other recipes call for 10 to 25 percent corn. In 1976-1980 the national economy utilized no fewer than 10 million tons of corn annually.

Significant supplements to procurement prices have been established with the goal of providing material incentives for the production of high quality grain of the best corn varieties. For example, the Zavety Il'icha Kolkhoz, Shpakovskiy Rayon, Stavropol Kray, which cultivates hybrid corn on an area of 2,800 hectares, in 1980 received a supplement of over 200 percent to the procurement price just for the sale of hybrid VIR42 grain with a consideration of the seed quality. Hundreds of tons of hybrid seed sold by the kolkhoz bring in tens of thousands of additional rubles, which noticeably raises the profitability of production.

Kolkhozes, sovkhoses and processing enterprises are given economic incentives to produce and sell high quality products. By means of cost-accounting relations this is reflected by the results of their economic activities. However, the existing system of stimulating increased output of high-quality products is not being fully utilized by kolkhozes, sovkhoses and industrial enterprises at the present time. For this reason the production of high-quality products is increasing slowly, and this is resulting in the incomplete fulfillment of consumer needs.



The technical base for the initial processing of agricultural products is insufficiently developed in the majority of kolkhozes and sovkhozes. If grain is initially processed in an untimely or unprofessional fashion in the enterprise its quality decreases significantly. Moreover, despite the completion of drying and cleaning operations directly in enterprises, grain-reception enterprises then find it necessary to repeat these operations because the condition of procured grain differs markedly from that which is delivered for industrial processing. For this reason it would be much more effective to complete this work only in elevators, where expenses for grain processing are usually 2-3 times lower than in kolkhozes and sovkhozes.

The existing system of wages for kolkhoz farmers and sovkhoz workers as well as workers of industrial enterprises is related more to the quantity than the quality of production. For example, in paying combine operators for their labor it is the qualitative indicator that is considered primarily--the quintals of threshed grain in hopper weight, whereas contamination and traumatization of the grain are not considered. In the Krasnoarmeyskiy Rice Sovkhoz of Krasnodar Kray during an experiment on the reception of rice raw materials from combines the system of wage payments for combine operators was altered to include a consideration of the quality of threshed grain. The results were not slow in coming. Machine operator E. G. Breze brought the quality of the harvested rice raw material to the outer limits in cleanness--all the grain that was delivered from his Kolos combine met the requirements for especially valuable varieties. This type of system of wage payments which takes the quality of the product into consideration is an important factor in increasing production output in kolkhozes, sovkhozes and industrial enterprises.

The quality of grain is affected considerably by the proper organization of its shipment. In Krasnodar Kray experience has been gathered regarding the utilization of a progressive method of organizing the transportation conveyor in grain harvesting that has fully demonstrated its high effectiveness. In Timashevskiy Rayon, for example, for several years now grain transport of all departments and organizations has been under a single management, operating according to an hourly schedule developed for all of the rayon's enterprises. The transport route is field to threshing floor to elevator. The basic data for developing the main working document on managing transportation for grain shipments includes calculations of transport needs to ship grain, actual distribution of means of transportation in the rayon's kolkhozes and sovkhozes, documents concerning the development of comprehensive brigades and centralized truck detachments and schedules for the movement of detachments.

The extensive introduction of a unified and efficient system of managing transportation resources for shipping grain according to hourly schedules enables us to complete harvesting operations in an organized manner and with as little idle time as possible and within the shortest possible time; to avoid grain losses; and to curtail to a minimum idle time of harvest technology and mechanisms for loading grain into trucks. In this case the time to process one truck decreases from 32-34 to 16-18 minutes. Cartograms of grain arriving at the elevators record hourly progress; they note the



name of the crop, the place of unloading and the number of unloaded trucks. Procurers must be the initiators for introducing hourly schedules.

As a result of introducing hourly schedules grain reception points, as experience shows, find it possible to plan grain shipments. This improves labor organization, significantly curtails expenditures per unit of production, curtails transportation expenses, frees trucks to ship other national economic freight and improves the quality of harvesting.

Among the most important goals presented by the 26th CPSU Congress to workers of agriculture, procurement organs and the entire agroindustrial complex is that of curtailing losses of agricultural products.

Economy and concern regarding replenishing the country's grain resources must be at the center of attention of workers of agriculture, procurement and processing enterprises and state procurement inspectorates, who are called upon to maintain constant controls over the preservation of agricultural products and to hold those who tolerate losses strictly accountable.

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